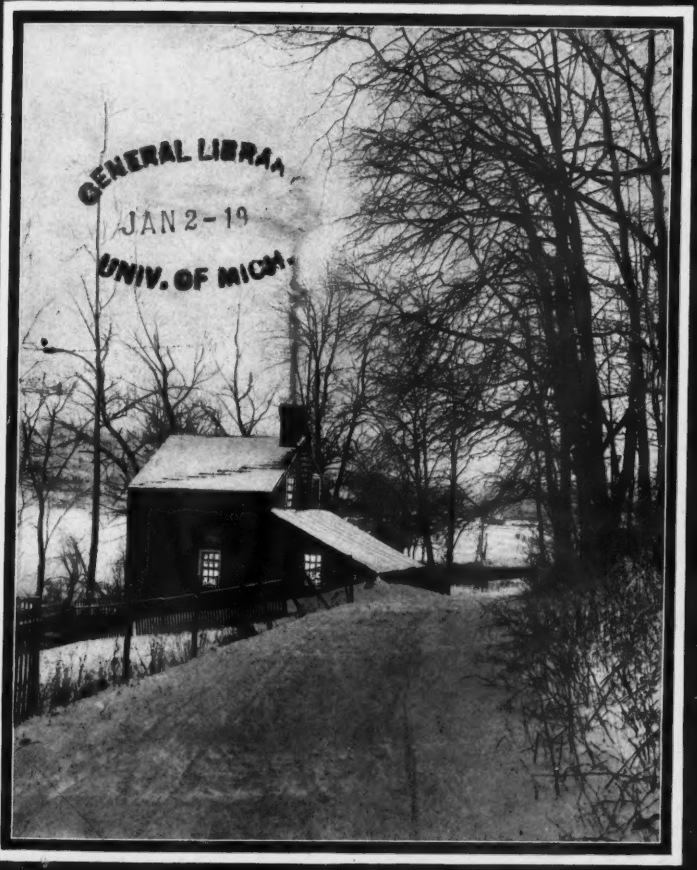
THE DENTAL DIGEST



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THE
DENTAL DIGEST

Vol. XXIV DECEMBER, 1918 No. 12

THE HISTORY OF THE DENTAL EDUCATIONAL COUNCIL OF AMERICA AND THE CLASSIFICATION OF THE DENTAL COLLEGES OF THE UNITED STATES

By Henry L. Banzhaf, B.S., D.D.S., Milwaukee, Wis.

The first move toward the organization of the Dental Educational Council was made in August, 1909, at Old Point Comfort, Va., when pursuant to a call issued by two committees representing the National Association of Dental Faculties and the National Association of Dental Examiners, a meeting was held. Five members were present from each of the above associations.

It was at first thought that it would be wise to organize a Council on Dental Education after the pattern of the Council on Medical Education of the American Medical Association, but after some discussion it was agreed that, in order to make the then proposed organization more representative, the National Dental Association should be invited to coöperate. Accordingly, the Secretary was instructed to invite Dr. Burton Lee Thorpe, President of the National Dental Association to appoint a committee of five members to represent this association in the organization of the Council. A Committee was appointed to draft articles of organization and was instructed to report at the next annual meeting to be held at Denver, in July, 1910. At this meeting President Thorpe reported his appointments from the National Dental Association, and the full charter membership on the Council was as follows:

From the National Dental Association: Drs. J. V. Conzett, Richard Summa, Louis Meisburger, Howard E. Roberts and A. R. Melendy.

From the National Association of Dental Faculties: Drs. William Carr, D. J. McMillan, J. P. Gray, W. E. Grant and Henry L. Banzhaf.

From the National Association of Dental Examiners: Drs. Chas. P. Pruyn, William C. Deane, S. C. A. Rubey, George E. Mitchell and F. O. Hetrick.

The Committee on Organization, consisting of the President, Dr. Charles P. Pruyn, and the Secretary, Dr. Henry L. Banzhaf, made its report, which consisted of the Articles of Organization for the government of The Dental Educational Council of America. Among other

things, the Articles of Organization declare that the object of this Council is to advance dental education and unify the standards of the various National bodies of the dental profession.

It was the general belief expressed by the men present at the Old Point Comfort meeting that there were some things wrong with dental education, that Dental Colleges and State Boards did not understand each other very well, and that by reason of their limited interchange of views these organizations were drifting farther apart instead of coming nearer together. It was found that the profession at large was interested in spots, but generally speaking there was apathy, lack of interest and distrust of dental education as developed in this country. It was very gratifying, therefore, to the friends of this organization, when Dr. Burton Lee Thorpe, the President of the National Dental Association, in his President's address, placed the stamp of his approval upon the general purpose and plan of this organization. Among other things he said:

"In April, 1910, your President was asked to appoint five members to represent the National Dental Association to coöperate with five members each of the National Association of Dental Examiners and the National Association of Dental Faculties in creating the Dental Educational Council of America, the object of which is the advancement of dental education and the unifying of the standards of the various National bodies of the dental profession; to inspect the various colleges under their jurisdiction with a view of ascertaining the character of the work done, and whether the needs of the community in which colleges exist are fully satisfied; to perfect a model curriculum and make a study of the existing dental laws of the various states, and present a report on the possibilities of more uniform dental laws. Your President selected Drs. Conzett, Summa, Meisburger, Roberts, and Melendy to represent the National Dental Association on this Council, with the hope that they may assist in bringing about the ideals proposed, which will result in giving our schools a higher standing and placing our profession where it rightly belongs."

This did a great deal of good, because it made it clear that this great National body of dentists was willing to carry its share of responsibility in such an undertaking.

The work of this Council was delegated to three committees, viz: The Committee on Colleges, The Committee on Curriculum, and The Committee on Dental Legislation.

Owing to lack of funds, the Committee on Colleges was unable to accomplish much during the first few years. However, surveys of the various colleges were made at different times, and reports on these sur-

veys read before the Council and discussed at the meetings. These inspections were necessary in order to ascertain the exact character of the work done, so that a classification might later be made. It was found that in many cases there was considerable room for improvement. Questionnaires were subsequently sent out to the dental colleges, and the returns were discussed at the meetings. During the years following the organization of the Council, and the meeting held in Louisville, Ky., in July, 1916, all the dental colleges in the United States were visited and reported on. At this meeting, the first Minimum Requirements for a Class A Dental School were adopted. These requirements have since been amended and revised, and approved by the U. S. Bureau of Education, at Washington, and at present are as follows:

Minimum Requirements for Class A Dental Schools, Adopted by the Dental Educational Council of America, at Louisville, Ky., July 24th, 1916. Revised at New York City, October 22, 1917, and March 26th, 1918, and at Chicago, Ill., July 31st to August 3d, 1918.

ADMINISTRATIVE POLICY

Section 1. (a) The administrative policy of the school must be satisfactory to the Dental Educational Council of America. The Dean or other executive officer must hold and have authority to carry out fair ideals of dental education.

(b) The value of the building and equipment (grounds excluded) must be equal to at least $300.00 for every student enrolled.

(c) The school must have facilities and equipment for at least twenty-five students in each class.

(d) The conduction of a dental school for profit, to individuals or a corporation, does not meet the standard of fair ideals, as interpreted by the Dental Educational Council of America.

ENTRANCE REQUIREMENTS

Section 2. (a) The requirements for entrance shall consist of graduation from an accredited high school or academy which requires for graduation not less than fifteen units of high school work obtained in a four-year course. No conditions on the foregoing entrance requirement shall be allowed.

(b) An accredited high school is defined as one which is accredited as a four-year high school by the United States Bureau of Education, or by a University which is a member of the Association of American Universi-

ties or by the State University of the state in which the high school is located.

(c) In the case of an applicant who is not a graduate from a high school or academy, as defined above, the full equivalent of such education in each individual case must be established, and attested to by the highest public educational officer of the state in which is located the dental school which the applicant seeks to enter, or by the authorized examiner of a standard college or university which has been approved by the Dental Educational Council of America.

(d) The entrance credentials of each student enrolled must be kept on file, and open to general inspection, until after graduation. Not later than sixty days after the opening of school the Dean shall send to the Secretary of the Dental Educational Council, and to the Secretary of the local State Board of Dental Examiners, a complete list of the students enrolled, together with a sworn statement that each student is possessed of the entrance qualifications outlined above.

(e) Students with two full years' credit from Class A Medical Schools, approved by the American Medical Association, may be admitted to the sophomore class. No other advanced credit in time may be given in any other case than as above specified. No special students shall be accepted unless they are in possession of the entrance requirements specified above.

(f) The foregoing regulations apply to all students, including those from foreign countries, and regardless of where the applicant expects to practise his profession.

COURSE OF STUDY

Section 3. (a) Beginning with the session 1917–18 the course must be four years in length, each year to consist of thirty-two weeks, and six days in each week. No degrees other than Doctor of Dental Surgery, Doctor of Dental Medicine, or Doctor of Dental Science may be given. Dental subjects must be taught throughout the entire four years. Schools that offer a three-year course with one year of college work as a prerequisite shall not be regarded as satisfactory.

(b) The school must offer a course of at least 4,400 hours' laboratory and didactic instruction.

(c) The minimum hours devoted to each branch shall be as follows:

Operative and clinical dentistry	1,300
Prosthetic technics	384
Crown and bridge technics	320
Operative technics	160

Oral hygiene	32
Dental anatomy	96
Orthodontia	96
Oral surgery	96
Physics, biology, or both	192
Chemistry (inorganic, organic, physiological metallurgy)	320
Technical drawing	48
Anatomy	320
Histology	128
Pathology (general and dental)	128
Materia medica	64
Bacteriology	128
Physiology	128
Dental rhetoric	96
Physical diagnosis, anæsthesia	32
Radiology	32
Jurisprudence, dental history, ethics, economics	32
Additions to above, or other subjects	268
Total	4,400

TEACHING FACILITIES

Section 4. (a) The classes in dentistry must be taught separately from the classes in any of the other departments, if the dental school in question is part of a university.

(b) The patronage of the infirmary clinic must be such as to give each student at least 150 operations in fillings (gold, inlay, amalgam, cement, root fillings, etc.) prosthetic work, and orthodontia. Treatments preparatory to the above, and cases of exodontia must not be included in the number stated above.

(c) In the anatomical laboratory not more than eight students, working in pairs, may be assigned to one cadaver for a complete dissection.

(d) Every twenty students working in the infirmary at any given time must have the undivided services of at least one demonstrator.

(e) Every thirty students working in the scientific laboratories must have the undivided services of at least one instructor.

(f) Every forty students working in the technic laboratories must have the undivided services of at least one instructor.

(g) No persons except those holding the D.D.S., M.D., or Bache-

lor's Degree, or equivalent, or who hold a license to practise dentistry, shall be employed as instructors.

LABORATORIES AND OTHER FACILITIES

Section 5. (a) The school must be possessed of the following number of laboratories and class rooms, equipped in the following manner:

(b) One chemical laboratory equipped to adequately teach qualitative, quantitative, general inorganic and organic chemistry and physiological chemistry.

(c) One microscopical laboratory equipped with sufficient high power microscopes, so that each student may be possessed of the use of a microscope when he is working in the laboratory.

(d) Sufficient class rooms—at least one of which must be equipped with a lantern for projection.

(e) Sufficient technic laboratories, so that each student in attendance is provided with an individual place for laboratory work.

(f) A dental infirmary, equipped with a sufficient number of dental chairs to adequately serve the senior class. An efficient equipment for sterilizing students' instruments must be provided.

(g) An X-Ray outfit for use in conjunction with the dental infirmary.

(h) A dental library constantly available to the students, which shall have at least twice the number of volumes as there are students enrolled in the school.

STATE BOARD RECORD

Section 6. The school must not have more than 25 per cent. failures before the various state boards more than two years in succession.

ATTENDANCE

Section 7. The record of attendance required of students must not be less than 85 per cent. for each year. Attendance shall be counted from the close of registration.

PROMOTION OF STUDENTS

Section 8. (a) A student who has incomplete courses or failures in 40 per cent. of his course for any semester, shall be dropped from his class.

(b) A student may not be promoted if he has conditions or failures in more than 20 per cent. of the course of any year.

(c) A student who fails to remove a condition or failure within twelve months from the time it was incurred shall automatically be dropped from the school.

(d) An incomplete course is one that has not been completed because of illness or other personal emergency.

PASSING MARK, CONDITIONS AND FAILURES

Section 9. (a) The passing mark shall be 75 per cent.

(b) A grade between 60 and 74 per cent. is defined as a condition.

(c) A grade below 60 per cent. is defined as a failure.

(d) A condition may be removed by examination.

(e) A failure may not be removed except by repetition of the course in part or entirely, i.e., by additional work under instruction approved by the Dean or the professor in charge of the subject.

(f) A condition which is not removed within thirty days of the opening of the next year, automatically becomes a failure and can then only be removed by a repetition of the course.

(g) If a school grades by letters it shall state (publish) definitely the percentage range value of each letter used in designation of standings.

CLASS "B" DENTAL SCHOOL DEFINED

Schools which in certain particulars do not meet the requirements for Class A, but may become eligible for Class A without complete reorganization.

CLASS "C" DENTAL SCHOOL DEFINED

Schools which could not meet the requirements for Class A without very extensive improvements, and a complete reorganization. Class C schools shall be considered "not well recognized dental schools."

TRANSFER OF DENTAL STUDENTS

Students of dental schools which have been well recognized, but lost this recognition, may transfer to well recognized dental schools, if acceptable to these schools. Such students may be accepted as far as entrance requirements are concerned on the requirements of the school in which the student began the study of dentistry.

At the meeting of the Council held in Louisville, Ky., in July, 1916,

it was decided that the time had arrived when a classification of all dental schools might be made by the Council. A copy of the Minimum Class A Requirements was sent to all schools, following which questionnaires were sent out as a preliminary step toward classification.

At the meeting of the American Institute of Dental Teachers, held in Pittsburgh, Pa., on January 23rd, 1918, a request was made, through Colonel H. D. Arnold, M. C., N. A., on behalf of the Surgeon General, that the Dental Educational Council of America make a classification of the dental schools, and submit it to him for his consideration. A special meeting of the Council was held at New York City on March 26th and 27th, 1918, and at this meeting a tentative classification of all the dental schools was made. Following this meeting each school was notified of its tentative classification, by the Secretary, and the schools placed in Classes B and C were told what was necessary in their particular case to meet the Class A requirements, and were given until the annual meeting of the Council to meet these requirements and ask for a higher rating if they desired to do so, in which case an inspection would be made by a committee of the Council. A large proportion of the B and C Class schools made application for a higher rating and asked for an inspection. All the requests for an inspection were complied with, and the reports of the committees read at the meeting in Chicago, on July 31st to August 5th, 1918, and discussed, and the following classification made:

CLASS A

University of Southern California, College of Dentistry, Los Angeles.
University of California, College of Dentistry, San Francisco.
Northwestern University Dental School, Chicago, Ill.
University of Illinois, College of Dentistry, Chicago, Ill.
University of Iowa, College of Dentistry, Iowa City, Iowa.
Harvard Dental School, Boston, Mass.
Tufts Dental College, Boston, Mass.
University of Michigan, College of Dentistry, Ann Arbor, Mich.
University of Minnesota, College of Dentistry, Minneapolis, Minn.
Creighton University, College of Dentistry, Omaha, Nebraska.
Ohio State University, College of Dentistry, Columbus, Ohio.
North Pacific Dental College, Portland, Oregon.
University of Pittsburgh, College of Dentistry, Pittsburgh, Pa.
The Thomas W. Evans Museum & Dental Institute, University of Pa.
Medical College of Virginia, School of Dentistry, Richmond, Va.
Marquette University, College of Dentistry, Milwaukee, Wis.

CLASS B

College of Physicians & Surgeons, Dental Dept., San Francisco, Calif.
Colorado College of Dental Surgery, Denver, Colo.
Georgetown University, School of Dentistry, Washington, D. C.
George Washington University Dental School, Washington, D. C.
Howard University Dental School, Washington, D. C.
Atlanta-Southern Dental College, Atlanta, Georgia.
Louisville University, College of Dentistry, Louisville, Ky.
Chicago College of Dental Surgery, Chicago, Ill.
Indiana Dental College, Indianapolis, Indiana.
Loyola University, School of Dentistry, New Orleans, La.
Tulane University, School of Dentistry, New Orleans, La.
Baltimore College of Dental Surgery, Baltimore, Md.
University of Maryland, Dental Department, Baltimore, Md.
St. Louis University, College of Dentistry, St. Louis, Mo.
Washington University Dental School, St. Louis, Mo.
Kansas City Dental College, Kansas City, Mo.
Western Dental College, Kansas City, Mo.
University of Buffalo, Dental Department, Buffalo, N. Y.
New York College of Dentistry, New York.
College of Dental and Oral Surgery of New York.
Western Reserve University Dental School, Cleveland, Ohio.
Ohio College of Dental Surgery, Cincinnati, Ohio.
Philadelphia Dental College, Philadelphia, Pa.
Vanderbilt University, School of Dentistry, Nashville, Tenn.
University of Tennessee, College of Dentistry, Memphis, Tenn.
Meharry Dental College, Nashville, Tenn.

CLASS C

Lincoln Dental College, Lincoln, Nebraska.
College of Jersey City, N. J.
Cincinnati College of Dental Surgery, Cincinnati, Ohio.
Texas Dental College, Houston, Texas.
State Dental College, Dallas, Texas.

Since the meeting in Chicago, in July, 1918, Baylor University of Dallas, Texas, has taken over the State Dental College, of that city. An inspection was made of this school, and Baylor University, School of Dentistry, was given a B rating.

Negotiations have also just been completed, whereby the University of Nebraska has absorbed the Lincoln Dental College, of Lincoln, Ne-

braska, and upon an inspection, the University of Nebraska, School of Dentistry, was given a B rating.

Of course, it is understood that the present classification is not necessarily final. For instance, a Class A school will not remain in Class A unless it continues to live up to the required standards. Schools not in Class A, when they feel that they have complied with the Council's Class A requirements, may apply for a higher rating. They will then be re-inspected, and if it is found that they are Class A schools they will be so classified.

The thought I wish to emphasize particularly is that the real objective of this body is to help all dental schools to become Class A dental schools in fact.

The membership of the Council which made the classification at the Chicago meeting, is as follows:

Albert L. Midgley, President, Providence, R. I.
John V. Conzett, Vice-President, Dubuque, Iowa.
Henry L. Banzhaf, Secretary-Treasurer, Milwaukee, Wis.
John H. Baldwin, Louisville, Ky.
L. L. Barber, Toledo, Ohio.
Thomas J. Barrett, Worcester, Mass.
John F. Christiansen, Salt Lake City, Utah.
H. E. Friesell, Pittsburgh, Pa.
S. W. Foster, Atlanta, Ga.
Louis Meisburger, Buffalo, N. Y.
A. R. Melendy, Knoxville, Tenn.
A. H. Reynolds, Philadelphia, Pa.
B. Holly Smith, Baltimore, Md.
Georgé N. West, Chicago, Ill.
Herbert L. Wheeler, New York City.

Subsequent to the meeting in Chicago the National Dental Association announced the following changes in the committee representing that body: C. Victor Vignes of New Orleans, La., and Clarence J. Grieves, of Baltimore, Md., in place of L. L. Barber and George N. West.

The results obtained by the Dental Educational Council since its inception have been very gratifying, but this must not be construed as meaning that its work is completed, because, in our opinion, it has only just begun. There are many problems yet to be solved. One of them is the curriculum. In an effort to standardize this for the country we have placed our services at the disposal of the Government, and are coöperating to the best of our ability with the Committee on Education and Special Training at Washington. This work is now in progress.

From left to right, upper row—Dr. A. R. Melendy, A. H. Reynolds, S. W. Foster, H. L. Wheeler, Col. H. D. Arnold, M. C., N. A., John H. Baldwin, George N. West, Louis Meisburger, Frank T. Breene, N. P. Colwell, John F. Christiansen. Lower row (seated)—L. L. Barber, John V. Conzett, A. L. Midgley, Henry L. Banzhaf, H. E. Friesell, B. Holly Smith, Thos. J. Barrett.

Colonel Arnold was the representative of the Surgeon General, Dr. F. T. Breene represented the Dental Faculties Association of American Universities, and Dr. Colwell represented the Council on Medical Education of the American Medical Association, all in an advisory capacity.

THE PROSTHODONTISTS AND THE INTERDENTAL SPACES

By George Wood Clapp, D.D.S., New York

(Fourth Paper)

Nature is so consummate an artist that we perceive her effects without seeing how she achieves them, even in those lines with which we are most familiar and in which we desire most earnestly to achieve success. In none of the details with which we are immediately concerned is this more true than in our perception of the use Nature makes of the interdental spaces between the anterior teeth and our adaptation of that use to our needs.

This lack of perception has caused many of us to be filled with fear of the interdental spaces. We want to do away with them. We sometimes call for forms of upper anteriors which would wholly or nearly fill these spaces. Some among us are willing to sacrifice naturalness of form in anteriors and harmony of tooth form with face form to the obliteration of the interdental spaces by the use of the squarest obtainable forms for all faces. And others, desiring to retain the naturalness of the forms and something of the harmony between teeth and faces, proceed very timidly with the selection of all save square forms, and set all teeth to exhibit the smallest interdental spaces possible.

Those of us who are interested in achieving esthetic success in denture service are especially fortunate in one thing, that we need not take anyone's word as to the existence of certain characteristics in good natural dentures. Knowing what we seek, we can examine many good natural dentures, and can thereby establish our knowledge on the sure foundation of what our own eyes have witnessed. In this we have a great advantage over our brethren who are more deeply concerned in certain other forms of dental service.

Having this advantage then, let us find out what use Nature makes of the interdental spaces between the upper anterior teeth, whether the same effects are desirable in artificial dentures, how we shall get those effects and what is the result on the appearance of the denture if the effects are not gotten. Let us inspect good natural dentures at distances of from 2 to 10 or more feet, when the lips are well parted, as in smiling, and in as many lights, both natural and artificial as possible. Things well worth our while are waiting to be learned.

We shall speedily discover three things: that the interdental spaces are an important part of Nature's esthetic plan for the appearance of the teeth; that she is not afraid of them, but uses them liberally in cases

where the gums show no resorption and are apparently in health; and that by means of them she defines the forms of the teeth and accentuates their color. Let us discuss each of these in some detail.

INTERDENTAL SPACES AND THE ESTHETIC PLAN

One cannot go very far in the study of the esthetic appearance of the mouth as a whole without becoming firmly convinced that Nature sought a pleasing effect. This is not a philosophical or academic essay, and it is not necessary to here discuss what constitutes beauty, or whether Nature foresaw the human intellect and shaped things for it, or whether we have learned to regard certain things as beautiful because we know no better. The practical thing for us, as workmen, is that in multitudes of instances the curvature and coloring of the lips, the fullness and tinting of the portion of the gums exposed in smiling or laughing and the lights and shades in and about the teeth, make what an artist might call "a charming ensemble"; that we are called upon by people in whom it has been destroyed by the falling in of the lips, the absorption of the gums and the loss of the teeth, to supply something calculated to restore that ensemble, and that the voices of aspiration and professional pride within our spirits demand that we do it well.

If Nature had not desired to use the interdental spaces as part of her esthetic scheme, she need not have employed them. There is no known reason why she could not have shaped all upper teeth with nearly rectangular labial surfaces, so that the approximal spaces would have been parallel most of the way up. There might have been crowding of food between, but one cannot look at the numberless problems she has solved with far more than human skill, without feeling that she could have solved this in some other way if necessary and still have left at least the labial surface rectangular. Some natural upper centrals *are* nearly rectangular.

In numberless instances very fine natural dentures exhibit wider interdental spaces than are called for, merely to avoid crowding of food. If crowding of food were the only excuse for the interdental spaces among the upper anterior teeth, those spaces could have been as narrow in all cases as they are now in cases exhibiting the most ruggedly typal form of square teeth. Furthermore the spaces between the centrals and laterals would have needed to be no wider than those between the upper centrals, whereas in many pleasing dentures they are much wider.

If our work as regards the upper anterior teeth be divided into the two great parts, mechanics and esthetics, and the mechanical necessity for such wide interdental spaces as Nature often employs, is removed,

their sole justification must be esthetic. And when we come to the esthetic uses Nature makes of the interdental spaces, we find such a wealth of material that only a part of it can be presented in one article.

NATURE'S LIBERAL USE OF INTERDENTAL SPACES

In some cases Nature makes the interdental spaces very small, like those shown in Figure 29 A. This is when teeth are of the severely square form. Such teeth are nearly rectangular on the labial

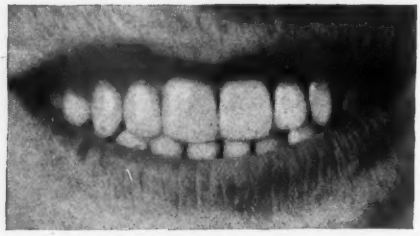


Fig. 29 A. The upper centrals are decidedly rectangular and the interdental space between them narrows to a mere line, halfway from neck to cutting edge. The spaces between the centrals and laterals are small

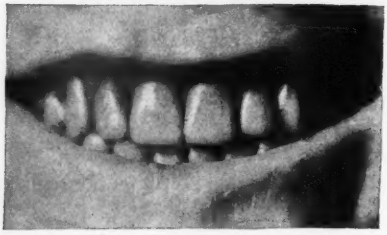


Fig. 29 B. Shows the medium square form designed by Dr. Williams, arranged to reproduce the effect in Fig. 29 A

surfaces. But teeth of this particular form are comparatively rare. No extensive studies have been made to show just how rare they are, but probably not more than four or five people in a hundred present them.

When the teeth are of the severely typal tapering form, the interdental spaces are usually of at least medium width and sometimes distinctly wide. It is evident that teeth like those in Figure 30 A would necessarily leave fairly wide interdental spaces. This is all the more true

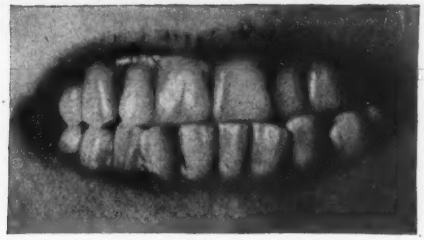


Fig. 30 A. Typal tapering upper centrals in incising bite. The interdental space between the centrals is wider opposite the middle third of the tooth, than in Fig. 29 A, and the shadow to which the space frequently gives rise, extends to the mesial half and so to the high light of the tooth

Fig. 30 B. Shows the artificial teeth of the typal tapering form designed by Dr. Williams (Mould 1 R), arranged as the natural teeth are shown in Figure 30 A

when one considers the wide cutting edges of many tapering laterals and the narrow necks.

Figure 31 A shows a set of teeth of the typal ovoid form. The interdental space between the left central and lateral cannot rightly be judged because of the malposition of the lateral, but that between the right

Fig. 31 A. Natural teeth, typal ovoid form. Interdental space of more than medium width

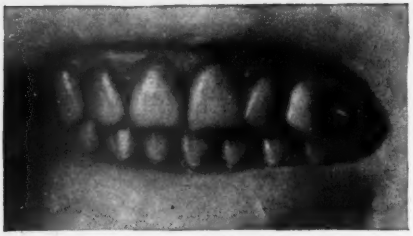


Fig. 31 B. Typal ovoid artificial teeth of the form carved by Dr. Williams, in nearly the same alignment as in Fig. 31 A. The interdental spaces are here quite wide but are certainly not unpleasant

lateral and right central is much wider than would be approved by those among us who wish to eliminate interdental spaces or reduce them to a minimum. Figure 31 B shows the typal ovoid form carved by Dr. Williams in nearly the same alignment. Certainly the interdental spaces are not unpleasant here.

By far the greater proportion of people exhibit teeth which are more or less extensive modifications of the typal forms. And practically every such modification leaves interdental spaces of at least medium width. Figures 32, 33A, 34A, 35A and 36 show several modifications of typal forms and the interdental spaces they exhibit.

The prosthodontist will of course not fall back on any mal positions of the natural teeth which reduce or eliminate interdental spaces as a justification for eliminating such spaces in artificial dentures. There is no evidence that Nature desires mal positions in any case. We regard them as forced upon her, and a great specialty has been built upon the need for correction of malpositions.

Fig. 32. Natural teeth, oval form, enlarged for study. Interdental spaces between necks and between cutting edges. These teeth are exactly harmonious in form with the patient's face. This form is considered by competent judges to be unexcelled in beauty

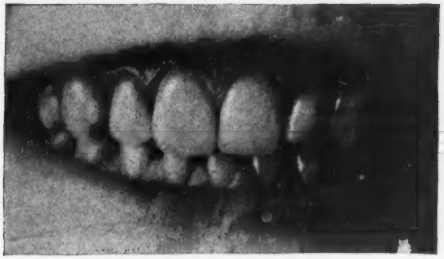


Fig. 33 A. Natural teeth, modified square form, medium interdental space

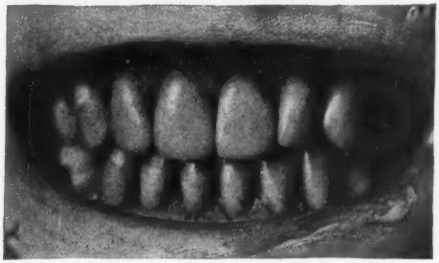


Fig. 33 B. Similar teeth as carved by Dr. Williams. Similar interdental spaces

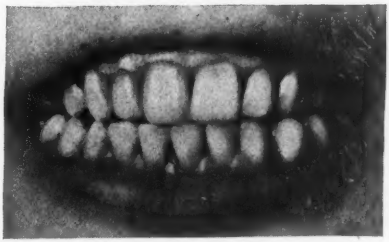


Fig. 34 A. Natural teeth, modified square. Large interdental spaces

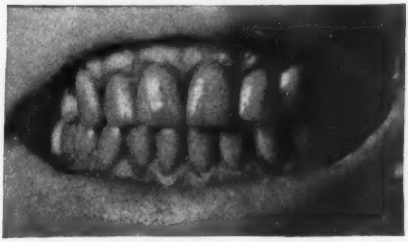


Fig. 34 B. Similar teeth carved by Dr. Williams in similar alignment. Interdental spaces only slightly reduced from those in the natural set

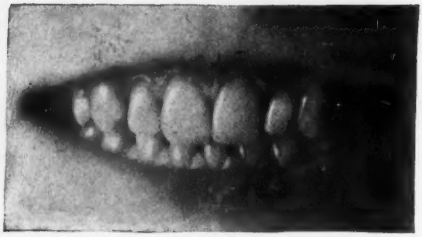


Fig. 35 A. Natural teeth of the intermediate square form, shown in smiling. Medium wide interdental spaces

Fig. 35 B. Artificial teeth of the intermediate square form, double photographed to appear as if in the mouth. The interdental spaces are of about the same width as in the natural denture, and are not displeasing

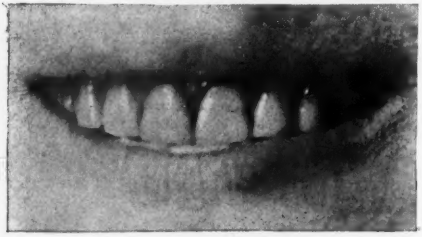


Fig. 36. The interdental space between these natural upper centrals in a young person is open down to the incisal third of the teeth. It affords a strong spot of dark color opposite the highlights in the teeth, is aesthetically very effective, and is in no way disagreeable

DEFINITION OF TOOTH FORMS BY INTERDENTAL SPACES

The importance of the interdental spaces in defining the outline of the teeth to the observer cannot be overestimated.

When the teeth are viewed at a considerable distance, say 15 or 20 feet, one sees merely a row of color with shadows upon it. The individual forms of the teeth cannot be well seen. At the first glance, when the person is nearer, say at 10 feet, the teeth are first seen

somewhat more distinctly, but it requires an appreciable time for the eye to recognize the forms of individual teeth. This recognition is based upon the differentiation by the eye between the light colored areas of the teeth and the darker colors of the gum and interdental spaces. The smaller the interdental spaces the more the teeth blend into one band of color and the more difficult it is to recognize individual forms. In the extensively modified forms, when the interdental spaces are wide, the form and beauty of the teeth are more quickly recognized.

Of course, it will not be thought that the teeth were shaped by the interdental spaces. It is well known that the teeth come through the gum completely formed, and that the gum merely fills in a part of the space not occupied by the teeth. But in the finest natural dentures the tooth form harmonizes with the face, as was demonstrated in the third paper of this series, and that harmony calls for interdental spaces of at least medium width in the majority of cases.

Fig. 37. The interdental spaces between artificial upper anteriors of the typal tapering form. They are by no means inconspicuous, but they carry out Nature's plan and are far from unpleasant

THE LIMITATIONS IMPOSED BY MATERIALS

No one familiar with the practical side of denture making will fail to recognize the limitations imposed by the fact that the materials from which we construct dentures are not identical in appearance with healthy human tissues, and that it is desirable to conceal vulcanite gums when the person speaks and smiles. But one may easily fall into the error of over concealing them, or of concealing them by wrong methods, and he may thereby miss values which would have given a natural appearance to the denture and have perfected the concealment.

The desire to conceal the artificial gum material does not justify the dentist in sacrificing for it all the esthetic considerations upon which the natural appearance of the denture is founded by the choice of a tooth form which permits very small interdental spaces, if that tooth form is not at least approximately harmonious with the patient's face form.

Fig. 38 A. The interdental spaces here form an effective background to define the teeth

The willingness to base all the esthetics of the artificial denture upon the creation of very small interdental spaces between the front teeth is founded upon an incomplete perception of the elements which determine the appearance of the pleasing natural dentures, and how far correct technic can be made to give interdental spaces their correct values in the color scheme of the mouth. Whether or not the devotion to small interdental spaces has been justified in the past by the conventional tooth forms and insufficiently developed technic, it is no longer justified. Dr. Williams has shown that the major element in the pleasing appearance of any denture is harmony of the face form and tooth form, and it is up to us as workers to establish this as the foundation of our work, to subordinate to it, in their proper order, the colors and positions of the teeth, with the resulting interdental spaces, and to employ a technic which gives to these spaces, as far as possible, the esthetic value which Nature gives them.

Fig. 38 B. The interdental spaces in Fig. 38 A, when the lip is lifted

THE INTERDENTAL SPACES ENHANCE TOOTH COLORS

It is when one comes to the study of Nature's employment of color in the interdental spaces, with relation to the appearance of the mouth as a whole, that he is mostly lost in admiration of her craftsmanship, and is in greatest danger of writing in superlatives.

There stands in the gallery of a celebrated photographer a full length portrait to which the artist has pointed with pride for many years, and which has been the subject of admiration by other artists. At the first glance it appears to the unartistic mind merely as a good picture, but not different from thousands of others. But after one has worked for a few years with photography, seeking to get much wanted effects and then comes suddenly upon this picture, he realizes instantly that here is a masterpiece.

That picture is great because of the way in which the drapery and figure have been handled against the floor and background, because of the way in which the light softly illuminates every part and accentuates different parts in just the right proportion. Even an artist could hope to take only a few pictures like that.

And yet Nature has exhibited in every pleasing set of teeth a skill in the use of the interdental spaces which is much greater than that of the photographer. She has set the colors and the forms of the teeth off against their background in such a marvellous way that we accept it as natural, as the way it should be. But we fall very far short of it in much of our restorative work.

The lips and gums form the background for the teeth. Every tooth has red in its composition. It is therefore, in ways hidden to the casual glance, chromatically related to its background. The gum tissue usually reflects the lightest color where the tooth is darkest, that is, at the prominent point over the neck. As the gum tissue recedes into the space between the middle thirds of adjoining teeth the rounding surface reflects less and less light. Finally, in many cases, the gum tissue stops and an open space between the teeth is left, which, seen from the front often appears nearly black. This is more apt to occur between the centrals and laterals than between two centrals, but the space between the centrals may be wide in the cervical third.

A little thought regarding the esthetic value of this space, say between the two upper centrals, will show the extreme skill with which the kinds and quantities of color have been used, and may point the way by which we can achieve similar effects, at least in part.

Take a case in which the gum is in perfect health and in the position normal to young adults, and the interdental spaces between the upper

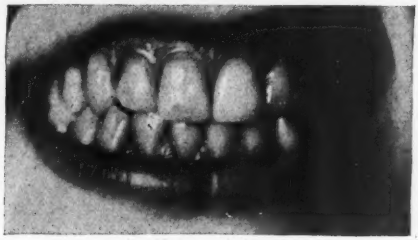


Fig. 39. Natural teeth of a young adult, showing healthy gums and an open interdental space between the upper centrals. Diagram of color location in Fig. 40

centrals are at least medium width as in Figure 39. Note the relatively light color reflected by the broad area marked "A" in the key drawing. Observe that the interdental space narrows rapidly and that the color reflected from it deepens rapidly, until at the point "C" the line of color is very narrow but very dark. It is probably never black, but is so deep as to appear black but not to be out of chromatic harmony with the red in the lips and gums.

Note the location of this point of deepest color with reference to the color in the teeth. The point of lightest color in the whole set of teeth is in the incisal half of each upper central shown at "D," Fig. 40. Nature values this so highly that she doubles the effect by placing the two brightest and largest tooth areas at the point mechanically most

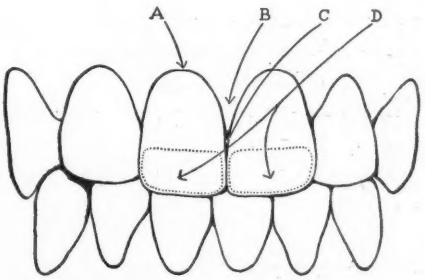


Fig. 40. The area "A" is that part of the upper gum from which most light is usually reflected. As the tissue recedes into the interdental space, as at "B," the amount of light reflected directly to the observer's eye is less and the tissue appears darker. By the time the location "C" is reached, there may be an open space, as in the set shown in Fig. 39, from which this is drawn. In many lights this space appears nearly black

The spot of lightest color in the natural teeth is in the areas marked "D." The effect of this spot of light color is greatly enhanced by the much smaller spot of very dark color at "C." The dentist who wishes to achieve natural effects in dentures cannot afford to overlook the contrast of colors between teeth and interdental spaces, or to lose that contrast by destroying the spaces

prominent in the entire tooth row. And to "throw up" this color in just the right way, she puts a mere spot or line between the two highlights, but it is the spot of deepest color in the tooth row. Clever, isn't it? The red of the gums, the tooth colors in which red is always a component, the highlights in the centrals, and just between them the one tiny point of deep color, chromatically harmonious with all the other colors.

A FEW CONCLUSIONS

It would be easy to draw many conclusions from such studies as these, and then to render them valueless by saying "we cannot do that because our tooth materials and gum materials are artificial and imperfect." If this is our attitude of mind such studies are worthless to us, and we must be contented to select tooth forms which practically obliterate the interdental spaces, a thing which Nature purposely avoided. We must recognize our limitations in material, in perceptions and execution and then work within them, but those limits are big enough to have permitted the exercise of all the skill of every artist who has graced the profession. Begging the question and making excuses will get us nowhere.

It has been shown that the appearance of the dentures, when seen at close range, will depend in great degree upon the harmony between the outline form of the face and the outline form of the upper central. As the majority of faces are not severely square, but are sufficiently modified to be somewhat rounding in outline, it follows that the majority of teeth in pleasing dentures will be somewhat rounding in outline, and will probably present fairly narrow necks in proportion to the greatest width of the teeth. That means that the interdental spaces will be fairly large. If these interdental spaces are skilfully handled by the dentist they will contribute to the beauty of the denture as they do in natural dentures. If they are unscientifically reduced in size or changed in form, they unavoidably give to the dentures an appearance Nature probably never intended.

SOME PRACTICAL SUGGESTIONS

It may not be amiss to here add a few practical suggestions for the handling of the interdental spaces in the vulcanite dentures, so that pleasing esthetic effects may be obtained.

The first suggestion, and very important one, is that the upper centrals must be of the length indicated for that case. If the tooth forms perfected by Dr. Williams are employed, the selection of a form by the methods outlined in the third paper of this series will usually provide

centrals of the proper length to hide the artificial gum when the patient smiles. If the conventional forms of anterior teeth are used, the length should be determined by means of a mark made on the upper bite, at the highest point to which the patient can raise the upper lip by the action of the lip muscles. In a small percentage of cases, the lip can be raised too far to permit the use of teeth extending to this mark, but in the great majority of cases the upper centrals should extend from slightly below the

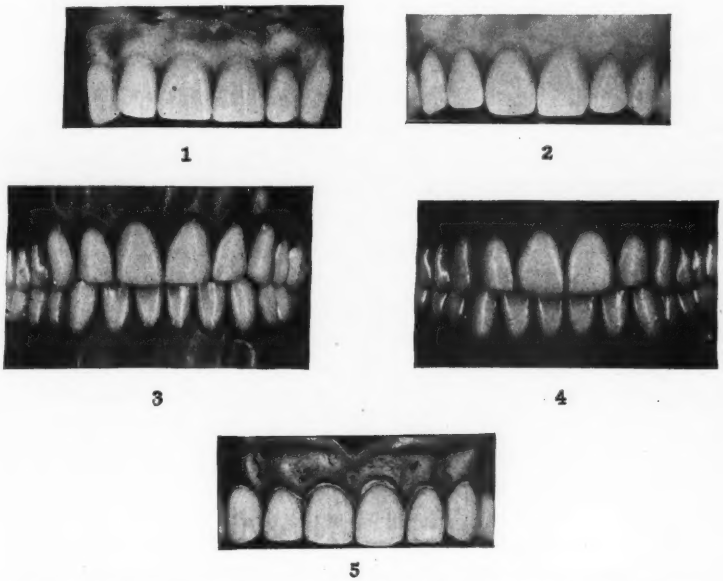


Fig. 41. The anteriors from four artificial dentures, Nos. 1, 2, 3 and 4, in which the effects achieved by the interdental spaces in natural teeth are pleasingly duplicated. The appearance is much more natural than in No. 5, in which the dentist sought to obliterate the interdental spaces by the use of a nearly rectangular conventional form

level of the edge of the lip when relaxed, to the mark just described. Even if the teeth are slightly longer in proportion to width than the face, they will appear better than teeth which are shorter and expose more gum when the person speaks or smiles. The selection of anteriors of correct length will go far to prevent exposure of the gum in smiling, and will aid greatly in proper handling of the interdental spaces.

The method of carving the festoons of vulcanite about the teeth will have a great influence on the appearance. The exaggeration of eminences over the teeth, or the establishment of thick gum margins are quite as unnatural as the flattening of vulcanite into a mere roll; and either

extreme renders a fine esthetic result impossible. It will be found useful to take impressions of the labial surfaces of the anterior teeth and gums in fine natural dentures and to use these as models for carving the depressions and eminences in artificial gums.

In artificial dentures made with porcelain crowns as anterior teeth, open spaces are often left between the teeth by the trimming out of the vulcanite and the effect is esthetically pleasing.

Some correspondents have advocated the elimination of interdental spaces, or their reduction to a minimum, because patients will not keep their dentures clean and these spaces are rendered unsightly by deposits of food débris. This is certainly an argument based on expediency. It is one to which Nature pays no further attention than to permit the débris to be one of the active causes in the loss of teeth thus neglected. If the dentist is an educator of the public, within his sphere, it would seem to be quite in keeping with his purpose and labors that he should point out to his denture patients the physical and esthetic necessity for at least a reasonable degree of cleanliness.

The prosthodontist's grasp of the esthetic possibilities within his reach, which have been greatly extended by Dr. Williams' labors in perfecting forms and sizes in artificial teeth, will depend, in no small degree, upon how well he imitates Nature's arrangement of the background about those teeth, in other words, how he handles the interdental spaces.

WAR GARDEN CONTEST

The War Garden Contest brought out so many contestants that the resulting papers could not be judged and arranged for publication in time for the December issue. The results will be announced in the January issue.

NO WASTE IN THIS VICINITY

A traveling man, who was served at a hotel in a western city one night recently, merely ate the centres out of the slices of bread, leaving the crusts on his plate. The next morning at breakfast he was waited upon by a committee of citizens and was informed that the bread he left the night before would be his first course for breakfast, and the committee waited to see that he ate it. He took them at their word and downed it like a patriot, which he likely was not.

DENTAL LAWS

NEW DENTAL LEGISLATION

By Alphonso Irwin, D.D.S., Camden, N. J.

THE MISSOURI DENTAL LAW

The Missouri Dental Act, approved April 10th, 1917, is one of the best, if not the best, enactments produced in recent years. If we had the time at our disposal to write an analytical review of this law, or the space to print the text in full, we would publish both, for it is worthy of the closest study, and possesses many features which could be adopted with benefit by other states. Meanwhile we will make a few general remarks in regard to this product of new dental legislation, before passing on to the subject of the Dental License Requirements.

In the first place, it is a *real* law, not a bluff or a parody, not a juggle of words or verbal camouflage intended to mystify the reader, or confound the admistration of justice. It bears the unmistakable stamp of a legal mind, trained in the art of technical construction of legislative Acts, which has employed cunning craftsmen to forge links in the chain of provisos that will be hard for any one to break. For a long time we have been scanning recent dental legislation, so that we could truthfully say a Bill had been passed which was entitled to be dignified by the name of a State Dental Law, and we have one at last from Missouri.

Legal Flaws: The basic flaw in many dental laws, especially belonging to the older class, is the *failure* to provide *adequate* prosecutors, prosecutions, penalties and punishments for the offenses designated. It is a universally conceded fact that a law which does not provide for and enforce adequate punishment for transgressions committed and categorically stated, is *no* law at all.

There are few dental laws which an astute lawyer, if given time, opportunity, means and provocation, would not *rip* to *pieces* in the estimation of a modern jury, leaving the prosecution floundering and helpless, without a legal atom to rest their case upon; while that class of cases which do not come before a jury would fail of conviction because conscientious men could not agree to convict under the terms of the law actually in force at the time of trial.

The crucial aim of new dental legislation has been to rectify defects of this character. Adequate provisions for prosecutors and prosecutions, penalties and punishments, have been drafted, advocated, legislated.

The legal marksmen of Missouri have not only scored a hit upon the bulls-eye in the construction of the Bill, but they have "*put it over.*" It is refreshing to one's mental faculties to peruse this document, and the state which fails to be *stimulated* by this legislative success of Missouri to greater effort in procuring new and better dental legislation, is to be sincerely pitied.

A Model Act. Among the eighty-seven points covered in the clauses of this Act may be mentioned that the name of the State Board is changed to Missouri Dental Board; regular examinations being held the second Monday in June and October; the door plate in English letters giving name of licensee as written in license, must appear upon outer door; the examination fee is increased to $25.00; it is unlawful for any person to *use* the *name* of any *company, association, corporation, trade-name,* or *business name;* one must register certificate within six months from date, with County Clerk, or certificate becomes null and void; and dentists must pay license fee on or before November thirtieth of each year. The standards of preliminary as well as dental education are *raised.*

Section 5493, including provisos in regard to the suspension and revocation of licenses in Missouri not only rectifies flaws in previous laws, but furnishes a *model* which other states may copy. Prosecutions, subpoenas, the taking of testimony, with power to enforce same, are some of the salient features of this section commanding attention. The authority vested in the Board of Dental Examiners to conduct "Inspection of Dental Offices," "Dental Sanitation," and to appoint "College Entrance Examiners to Dental Colleges" as well as to punish any one "falsifying entrance credits," and any one "assisting in falsifying entrance credits," "the filling of dental prescriptions by druggists," "exemption from jury service," "City Registration for St. Louis," are some of the leading points of interest in appropriate clauses.

Section 5495-a defines "misdemeanors," including advertising and advertisers in the category; forgery is classified as a misdemeanor, instead of a felony, as in many laws.

Sections 5495-b and 5495-c present most *complete* and *satisfactory* reciprocity clauses; while Section 5495-i and 5495-l dispose of violators of the laws effectually.

Section 5495-m provides for the apparatus, equipment, conduct, curriculum, Faculty, and four years' graded course of "32 weeks each, of five and a half days each," for dental colleges of Missouri.

Section 5495-x provides a fine of $200.00 and a penalty of one year's imprisonment for conviction of misdemeanors, each or both, according to the grade of the offense.

Section 5495 from a to z is bristling with virile points, but the crux

of the law is the clause 5495-p providing as the prosecuting attorneys the County Prosecutor and the Attorney General of the State.

What we need most, is not so much new dental legislation, as more dental "law going around *in boots*." Everybody's business is nobody's business, and the fact that the prosecutor of violators of dental statutes wears official "*boots*" insures enforcement, particularly if the aforesaid boots are heavy, swift, and vigorous.

Legal Psychology Spirit. This naturally leads us to the psychology back of this new dental legislative Act. If the officers and men of the commonwealth are *equal* to *enforcing* the law, then indeed our friends in Missouri are to be congratulated. But if the stage of development in mental philosophy of the executives and populace has not been reached, whereby Acts can be vitalized by *deeds*, the law becomes another dead letter upon our statute books. If the *conscience* of the people has become aroused to the degree necessary for the enforcement of the law, then violators will be convicted and punished. The criminals of St. Louis, which constitutes a centre for evil-doers, like all great cities, if guilty of crime must be reached by such a law, and the State of Missouri freed from the *stigma* cast upon her by the *monstrous adepts* in criminology (which breed in *all* populous centres in all the states), if it is enforced.

If such a law is administered with the marvelous dynamic energy, swiftness, impartiality and honesty of purpose, that have characterized some of the Executive and Judicial officers in this State, of national renown in former years, and who have occupied respectively the positions of County Prosecutor, Judge, Attorney General, or Governor, the animus back of the prosecutions will be pure, honest, trenchant, above suspicion, and fearless. Let us hope that the mantle of great minds inspired by worthy motives, will fall upon the shoulders of equally capable and conscientious successors, who will administer the dental as well as other laws of Missouri wisely, so that the State may become a terror to evildoers and a model of all that is good and grand, and great and useful in life. The *soul* of a commonwealth speaks officially through its *laws* and *executors*. The *spirit* of the people must be *equal* to the task of *enforcing* them. In conclusion, the Act and requirements cover forty pages and include approximately ten thousand words. The length of this law arouses comment. It is one of the longest laws in existence, relating to the vocation of dentistry. At the present time, few are longer, yet compared to many other professional laws, it is short. The verbal repetitions, essential in order to make the Act clear, precise and complete in letter, intensity and spirit, as well as invulnerable in court contests, add greatly to the length of the enactment. Instead of this characteristic being a drawback, it is a recommendation, because it

leaves no technicality for lawyers to seize in order to aid illegal practitioners of dentistry to escape punishment. If the violators of the law expect to escape through some loophole in this statute, created by a lack of words, they will be woefully mistaken. The repetition of legal phrases, so wearisome to the casual reader, is necessary in order to make it puncture-proof to the thrusts from the shafts if irony, sarcasm, argument and eloquence so ably used by foxy lawyers, in obtaining the acquittal of guilty clients.

Why the opposition did not "can" this Act, tack a rider to it compromising its legality, insert a word confusing its meaning, drop an essential phrase nullifying its purpose, or juggle with punctuation marks in order to make the law defective, is best known to the progressive dentists of Missouri. Hence our congratulations!

VIRGIN ISLANDS

Queries relative to the Virgin Islands, formerly the Danish West Indies, have been received. The answer should be official and up-to-date. The Hon. Wm. J. Browning, M. C., of Camden, N. J., reported that "he had visited the islands last year and that they were not worth much, in fact this country had an elephant on its hands."

Mr. Eugene F. Harley, Chief Statistician for Manufactures of the Census Bureau, informs us that: "The Virgin Islands are rich in farms; average size 160 acres, with animal husbandry profitable in returns. The fishing industry is being developed. Cane-sugar is a product."

Dentists will please note the number of whites in these islands. The population Nov. 1, 1917, was 26,051, of whom 1,922 were *whites*, 19,523 were negro, and 4,606 mixed.

The three principal islands are St. Croix, 14,901 population; St. Thomas, 10,191 population; and St. John 959; the islands contain three cities, Charlotte Amalie on the Island of St. Thomas, 7,747 population; Christiansted, 4,574 population, and Frederiksted, 3,144 population on the Island of St. Croix. The total area is about 132 square miles. There are about 50 other islands, the largest containing about 1 square mile. Address Admiral Wm. C. Braisted, Surgeon-General, Chief of Bureau of Medicine and Surgery, Washington, D. C., for dental license requirements.

BRAZIL

DENTAL LICENSE REQUIREMENTS

Dentists should realize that Brazil covers a vast territory, 3,209,807 square miles; population, 22,992,937; divided into 20 states, each one having its own license system (also one territory and one district).

GENERAL REQUIREMENTS

The Portuguese language must be spoken. We submit the dental license requirements in the principal states obtained from various authorities:

PARA, BRAZIL

"In regard to the legal requirements to be complied with by dentists desiring to locate in Brazil, I have been informed that foreign doctors had only to show their diplomas and, if they were from recognized institutions, that they could practise where they pleased. This, of course, would in a measure be subject to local or State laws.

"It is my belief that this city does not offer any great inducements for a foreign dentist, and the present local demand is supplied by natives, most of whom received their education in America.

"An American to qualify in the United States of Brazil as a dentist in good standing, will have to observe the following: His diploma must be recognized and certified to before a Brazilian Consul; his duly legalized diploma will then have to be presented by himself before the faculty of either the Rio De Janeiro, Bahia, or São Paulo College, any one of which is duly qualified to make the necessary examinations and pass the proper certificates. It will be necessary for the applicant to remain for a period of not less than one year at one of the above named colleges. The applicant, if successful, is now qualified to practice, subject only to the usual taxes and contributions that each State has for this and similar professions."

RIO DE JANEIRO, BRAZIL

"In order to obtain a license to practise dentistry in Brazil, the graduate from a reputable dental college in the United States of America would be compelled to undergo a technical examination of the most comprehensive sort and in the Portuguese language."

PERNAMBUCO, BRAZIL

"All foreigners to be allowed to practise dentistry in Brazil, must pass an examination in the Portuguese language at the Government Medical Institute (Faculdade de Medicina) in the city of Bahia, Brazil.

"It is made exceedingly hard for a foreigner to get through, and unless you have capital to carry you for a year or more, your chances would be nil."

BAHIA, BRAZIL

No. 1. We have no special law or regulations with respect to the practise of dentistry except the general regulations of the Medical Academy which requires every practitioner to be the holder of the degree of this Academy. This degree is conferred upon graduation from a course of two years' study. Any applicant with a foreign degree must pass an examination conducted in the Portuguese language under the auspices of the Dental Committee of the Academy of Medicine.

No. 2. The Academy does not confer any license, but upon examination and approval of the applicant he is authorized to practise the dental profession in Brazil.

No. 3. The examinations are held in March and October of each year.

No. 4. Address the Secretary of the Medical Academy at Bahia.

FUTURE EVENTS

AMERICAN INSTITUTE OF DENTAL TEACHERS

The next annual meeting of the American Institute of Dental Teachers will be held at Hotel Piedmont, Atlanta, Georgia, January 28, 29, and 30, 1919.

Papers on the teaching of war dentistry and an exhibit of war appliances will be the main features, and along with these will be the usual papers on teaching methods.

All persons interested are cordially invited.—ABRAM HOFFMAN, *Secretary*, 381 Linwood Avenue, Buffalo, N. Y.

ANNUAL MEETING OF THE DENTAL PROTECTIVE ASSOCIATION OF THE UNITED STATES

The Annual Meeting of the Dental Protective Association of the United States will be held at the Palmer House, State and Monroe Streets, Chicago, on the third Monday of December, the 16th, at 4 P. M., sharp. The report of the officers will be given; a board of Directors will be elected, and such other business transactions as should come before the Association.

All members are urgently requested to be present, By order of the Board of Directors, J. G. REID, *President*, J. P. BUCKLEY, *V-P. and Secty*, D. M. GALLIE, *Treasurer*.

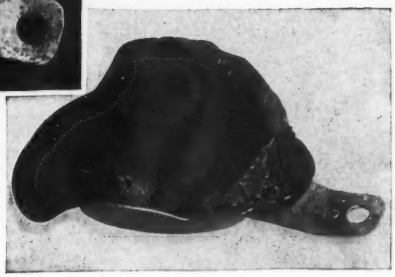
SUGGESTIONS FOR ACCURATE PREPARATION FOR PLATE WORK

By Victor H. Sears, D.D.S., Camp Beauregard, Louisiana

[I am glad to have the opportunity of publishing the papers of which this is the first, not because much has not been written on this subject, but because we need either to have much more written or to pay better attention to what has been written.

Dr. Sears is connected with one of the prominent laboratories and knows as well as any man the quality of average impressions and bites sent in for the construction of dentures. He sends the photographs marked "A" and "B" below, with the notation "Two reasons for writing a paper on impression taking."

A



B

I don't know who sent these impressions to Dr. Sears, but they are fairly representative of the vast majority of impressions sent to laboratories. And they are two disgraces to the profession as a whole.

There is an attitude common to many dentists to "look down" on a laboratory man because he may not have a D.D.S. degree. But no dentist who sees the quality of impressions and bites sent to laboratories can retain this attitude, provided he knows enough to be able to take a good impression and bite, or to recognize one when he sees it.

There are undoubtedly differences in quality of laboratory service, but I am constantly surprised that many laboratories turn out as good work as they do, under the conditions. I am sure the dentists who send such execrable impressions could not do it.

The laboratories have doubtless come to stay, partly because they enable dentists who take the quality of impressions shown in "A" and "B" to obtain better prosthetic work than they could do themselves, and thus help them continue in practice. We use them quite as much as "crutches" to help our own inability as we do to effect financial economies.

Anyone who has ever been compelled to walk with a crutch, even for an hour, and who has experienced the sensation of having a crutch slip, when carelessly placed, realizes the importance of giving even a crutch a fair chance.—Editor.]

FULL UPPERS

1. Select a clean, smooth, bright metal tray, a little larger than the mouth would indicate for an ordinary plaster impression.

2. See that the tray conforms to the arch of the vault along the posterior margin. The tray should extend well back over the tuberosities, and should be at least one-eighth inch short of all muscular attachments on buccal and labial sides.

3. The correct length of a denture posteriorly will depend upon the location of the junction of the hard and soft palates as well as upon the flexibility of the anterior ridge. In all full cases the posterior margin should end on soft tissue; that is to say, the denture should end back of the hard palate. The more flexible the anterior alveolar ridge, the farther back will it be necessary to end the plate. In an extremely soft ridge case the plate should extend as much as one-fourth inch upon the soft palate and press firmly into this yielding tissue.

4. The junction of the hard and soft palates is located by either of two methods. First, by the foveola palatina, two little depressions just lateral to the median line at the junction of the hard and soft palates. Second, the line is located by having the patient open the mouth wide and saying "Ah" two or three times. It will be noticed that at a certain line the loose soft palate will be elevated every time a vocal effort is made. The line at which this soft, vibrating tissue raises and lowers corresponds, for our purpose, to the posterior border of the hard palate.

5. Shape a piece of high-fusing modeling compound to the tray. The black impression-tray compound suggested by Dr. Hall is well suited

Fig. 1

to this purpose. Proceed as in taking an ordinary compound impression, except that instead of holding the tray by the handle, place the index finger in the centre of the tray and apply steady but light pressure upward or upward and slightly backward; this procedure will automatically secure equal pressure on both sides.

6. Chill the compound and remove the impression from the mouth. Trim away any excess compound on buccal and labial sides as well as along the posterior margin. Do not remove the compound from the tray yet (Figure 1).

7. Locate the hard areas. This can be done only by firm pressure upon every part of the vault. Generally the hard areas will be found to occupy a position corresponding to the old style airchamber but there may be other hard places present. All hard areas including the rugae should be generously relieved in the compound tray at this stage. Too much relief at this stage is much better than not enough. Be sure to scrape the centre enough so that the impression will not rock when biting pressure is applied. A sharp scraper is an excellent instrument for making relief in the compound (Figure 2).

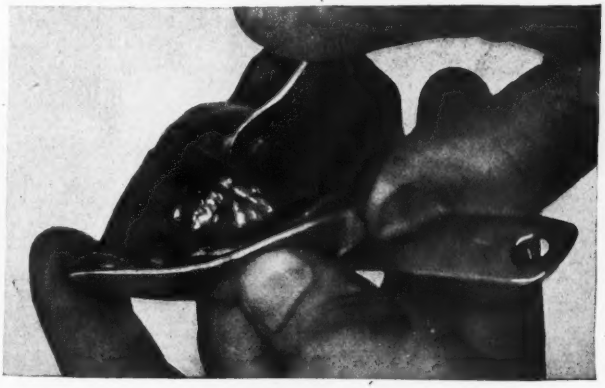


Fig. 2

8. Insert the impression into the mouth again and test for rocking. If, when firm pressure is applied in the bicuspid region, first on one side and then on the other, the impression does not rock, it may be assumed that the relief has been sufficient.

9. Remove the metal tray from the compound impression tray thus formed.

10. There should now be enough suction in the impression to hold it in position while taking the bite. Do not heat nor in any way change the palatine portion of the impression during the subsequent steps. This

part is to serve as a key in seating the impression accurately to position.

11. Dry the occlusal portion of the compound tray thoroughly and add some sizzling hot compound to build up the occlusal plane. The compound for this purpose need not be high-fusing, but must become brittle at mouth temperature. The entire occlusal plane may be built up by adding the hot compound from the flame, but if much is to be added it is best to take a roll of plastic compound from the hot water pan. Very little is added in the molar region.

12. Modeling compound is extremely sticky when hot and dry, but does not stick to a cold surface when wet; therefore, if plastic compound is added from the pan, it is necessary to heat the surface which is to be placed on the occlusal plane by passing the surface through the flame. (Figure 3). Kerr's, Blue Diamond, Downie's, and Modelrite are all good for this purpose.

Fig. 3

13. In building up the occlusal plane, both sides should be built up equally, and the compound should be equally soft on both sides so that the same amount of resistance will be offered to the muscles of mastication on both sides (Figure 4).

14. If more resistance is offered to the muscles on one side than on the other, the right and left sets of muscles will not contract equally and a

Fig. 4

strained condition will result. A denture constructed to a bite of this kind cannot be entirely satisfactory because the teeth on one side will strike sooner than they do on the other side.

15. The patient should be seated in a comfortable position, with the head centred directly over the spinal column. It is better to have the patient's head too far back than too far forward. If the head is inclined too far forward, there is danger of protruding the mandible, and if the head is thrown to one side there is danger of the mandible falling somewhat to that side.

16. Dip the newly added hot material into warm water to prevent burning the patient's lower lip and quickly carry the impression to the mouth, seating it to position. During the process of adding and heating on the occlusal side, do not allow the heat to penetrate to the palatal side and distort the "key."

17. As soon as the impression is properly seated, instruct the patient to quickly bring the lips together in the rest position and swallow. If the mandible does not move upward far enough, instruct the patient to swallow again and again until the correct relation has been established. The secret of success at this stage is not to let the patient know that your

purpose is to register the bite. Say "Hold the impression up with the lower jaw," or "Keep the lower teeth against the impression so that it cannot fall down," but under no circumstance suggest biting.

18. Have the patient hold the impression in place with the lower jaw until the compound has reached the brittle stage. The bite is then completed. Chill in cold water (Figure 5).

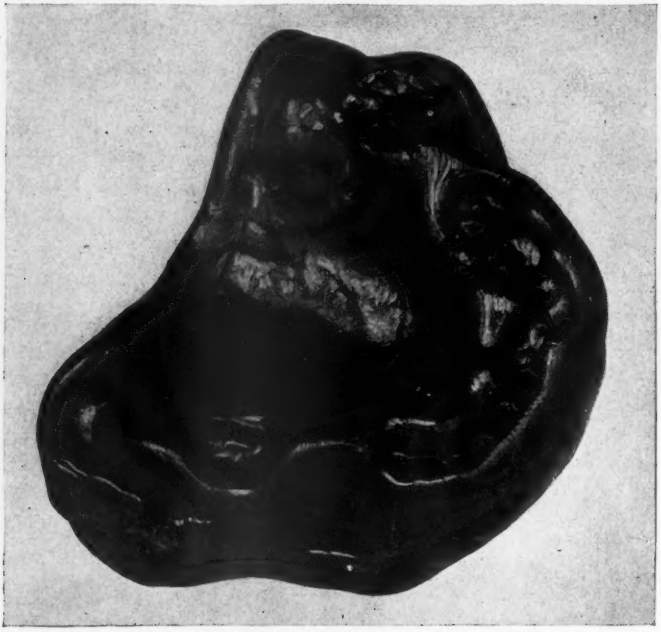


Fig. 5

19. If the compound on the occlusal surface was distributed so that the resistance was equal on both sides, and if the compound was soft enough the normal relation was registered. However, the bite should be tested in order to be certain that it is correct. The test is made in the following manner:

20. With a sharp knife obliterate all of the bite thus taken except the very tips of the depressions made by the lower cusps. (Figure 6).

21. Carry the impression to position in the mouth, and have the patient snap the lower teeth against the brittle compound two or three times in quick succession. If the bite is correct the patient can perform this act accurately each time, the impression will not shift as the teeth strike the occlusal plane, and the sound will be a solid one of all cusps hitting at one time. If, however, the patient has protruded the mandi-

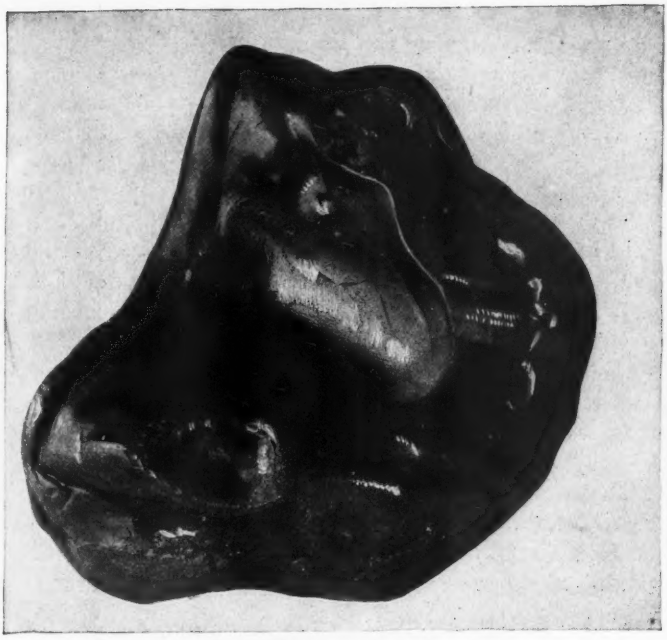


Fig. 6

ble in the first instance, or if a strained bite has been taken, the shifting of the tray can be both seen and felt when the lower cusps strike the occlusal plane. If strained, the patient will feel that one side strikes harder than the other. Also by listening carefully it will be heard that the cusps strike first on one side and then on the other, or there is a sound of sliding to position.

22. If it is found that the bite has been strained on the right side, for instance, and the right cusps strike the occlusal plane first, remove the impression from the mouth and with a sharp knife shave off a little from the right side of the occlusal plane. Now heat the whole occlusal surface to a depth of about one-eighth inch, carry the impression once more to position and have the patient bring the lips together and swallow. When the compound has been chilled, obliterate the depressions again, except the very tips of the cusps, and test as before. Having verified the bite the impression may then be completed.

23. The ideal way of constructing a denture is to take the impression with the buccal and labial rim the same height and thickness as the proposed denture, so that no changes will be necessary on the completed denture. To determine the exact height, proceed as follows: Cut the

entire buccal and labial rim of the impression down nearly to the crest of the alveolar ridge. Build up first the right side of the rim with medium fusing compound. For the purpose of muscle-trimming, the compound should not be high-fusing but should remain brittle at mouth temperature. Kerr's, Blue Diamond, Downie's, and Modelrite are suitable.

24. Use the flame in building up the rim but be sure to immerse the compound in water of 150-160 degrees F. to prevent burning the patient.

25. When the right side of the rim has been built up in the manner described and the added compound is still soft, especially at the very edge, seat the impression to position. Carry it into the mouth, left side first, holding the lip and cheek high on the right side so that the soft compound will not be bent over in carrying it to position. Have the patient hold the impression up firmly in place with the lower teeth and muscle-trim the softened margin by alternately protruding the lips as in whistling and drawing them back as in smiling. This movement performed two or three times while the compound is in the flowing stage will cause the muscular attachments to cut into the soft mass and automatically establish the correct height of the rim. The excess compound thus turned down on the buccal and labial should be cut away, but do not alter in any way the margin of the rim. The facial contour may be restored in compound at this time.

26. Heat the other side in the same manner and carry it to place in the mouth, cool side first. Muscle-trim this side and trim off the excess. It may be necessary to heat the rim in the region of the six anteriors and have the patient muscle-trim the front part of the impression at the place where the two halves of compound were added. After a little practise it will be found possible to add the entire rim and have the patient do all of the muscle-trimming at one operation (Figure 7).

Fig. 7

27. In simple cases a little time may be saved by cutting down the compound impression tray with a knife until it clears the muscular attachments.

28. The final step in the making of the compound impression tray is known as "post-damming." Dry the palatine surface of the compound and place a thin roll of low-fusing wax across the posterior margin upon the palatine surface. The black wax upon which Trubyte Teeth are carded is ideal for this purpose. Seal this to the tray, and while the wax is still warm, carry the impression to position in the mouth. Have the patient bring the lower jaw into contact with the occlusal plane and press the impression firmly against the tissues so that the pressure caused by the wax will be equalized. The object of this wax is to seal the posterior margin against ingress of air. If the anterior ridge is firm, very little post-damming will be necessary.

Fig. 8

29. Cutting from the inside, trim the buccal and labial rim all around to a sharp edge. This will give the necessary bulk to the plaster along the edge of the impression. Roughen the palatine surface by any means so that the plaster will stick to it (Figure 8).

30. Sift some model plaster into a clean dish and be certain that the plaster bowl is perfectly clean, so that no lumps or particles of plaster will be in the mix. A small particle of any kind might prevent the impression from going accurately to position.

31. The following procedure will give approximately the proper consistency, although it will vary slightly with different kinds of plaster.

32. The plaster bowl is first moistened. Then fill a tablespoon with as much water as it will hold and pour this into the bowl. Stir a pinch of powdered potassium sulphate in the water to hasten the setting. Sift three *level* tablespoonfuls of model plaster into the solution and spatulate until the mix is smooth.

33. Dip the compound impression tray into water to prevent the plaster from hardening too quickly by contact with a dry surface. Place the soft plaster in the compound impression tray, making sure of an excess at the tuberosities and in front (Figure 9).

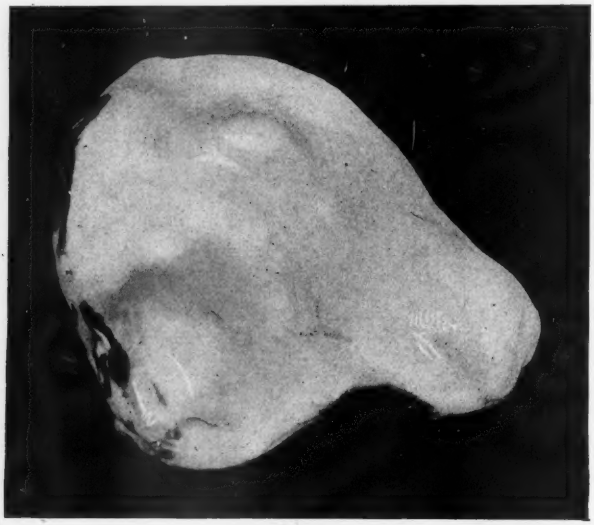


Fig. 9

34. Quickly place the occlusal surface of the compound tray on the lower teeth so that the cusps rest into their corresponding depressions on the occlusal plane. Instruct the patient to bring the impression tray *fully* to position against the upper arch by closing the mouth. Hold the upper lip out labially while the patient is closing. As soon as the mandible has been brought up as far as it will go, notice whether the face has the proper contour. If there is excessive fullness at any place, light pressure on the cheek or lip will force the plaster out of the way. Have the patient hold the impression *firmly* in place until the plaster has set.

35. To remove the impression, instruct the patient to close the lips and fill the mouth with air. This should cause the impression to fall

down without breaking. If this fails, inject a little water under the impression to break the adhesion (Figure 10).

36. Occasionally it may be necessary to make more than one attempt at securing a perfect impression. If so, all of the plaster should be removed from the compound impression tray or another very thin mix may be used over the first one. If the latter method is used, be sure to soak the impression in clean water before adding the second wash of plaster. In either event, the impression should be examined to discover if any place on the compound tray presses too hard against the tissue. This is indicated by the dark modeling compound showing through the white plaster. Any such dark spots should be scraped before a second attempt is made.

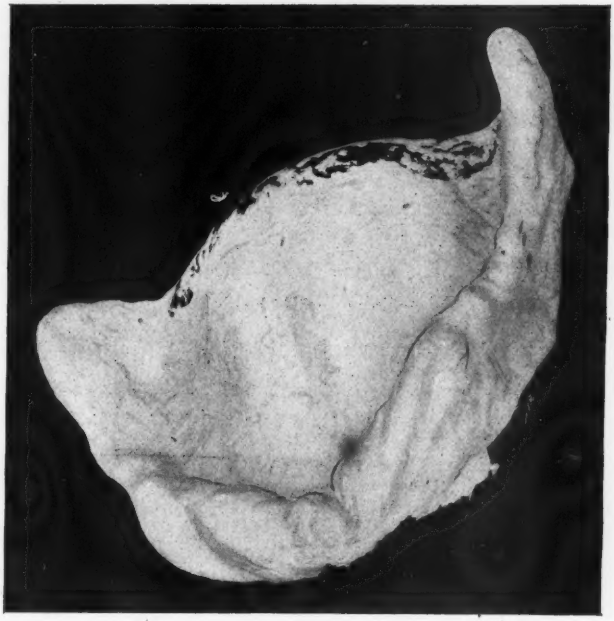


Fig. 10

37. Wipe the roof of the mouth free of mucus. Moisten the point of a soft indelible pencil and outline the hard areas on the mucous membrane. The extent of the hard areas can be very accurately mapped out on the impression by outlining them in the mouth with an indelible pencil and then inserting the impression once more to position. The indelible pencil markings will thus be transferred to the plaster impression (Figure 11).

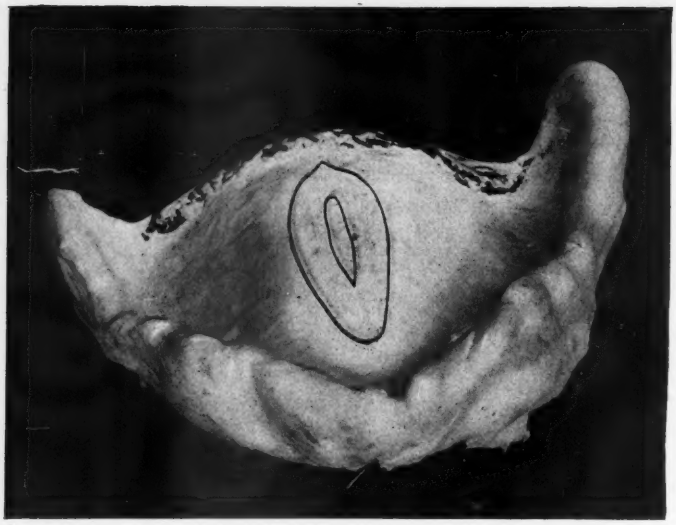


Fig. 11

38. Relieve the hard areas with sandpaper or a sharp scraper. The rugae can best be relieved with a discoid.

39. The impression, as soon as dry, should be given a very thin coat of sandarach varnish. This will serve to prevent the thin areas of plaster from leaving the compound.

40. In taking the bite by this method it is, of course, necessary to take a separate impression of the lower teeth so that the cusps of the lower teeth may be made to fit into the depressions on the occlusal plane (Figure 12).

Fig. 12

PLATINUM LICENSE REQUIREMENTS REVOKED

November 15, 1918.

From: Platinum Section.
To: The Dentists' Supply Company, 220 West 42nd St., New York.
Subject: Revocation of so-called Platinum Rules and Regulations, dated August 17, 1918.

1. The following Order was issued November 14, 1918:

"Because no longer required for the public safety the Director of the Bureau of Mines, in charge of Explosives Regulation, has made the following changes in the General Information and Rulings under the Act of October 6, 1917 (40 Stat.-385) and as amended by the Sundry Civil Act of July 1, 1918.

a. All regulations relating to ingredients not used or intended to be used in the manufacture of explosives are revoked and no further license of such ingredients will be required.
b. All regulations relating to fireworks are revoked and no further license of fireworks will be required.
c. All regulations relating to Platinum, Iridium and Palladium, and compounds thereof, are revoked and no further license of Platinum, Iridium and Palladium will be required.

Approved:
VAN H. MANNING, Director.

Very truly yours,

Approved:
FRANKLIN K. LANE
Secretary of the Interior.

CLARENCE HALL
Chief Explosives Engineer."

2. The effect of the foregoing Order is to render void any licenses heretofore issued to you under the so-called Platinum Rules and Regulations, dated August 17, 1918; to render unnecessary further compliance with said Rules and Regulations; and to terminate the necessity for securing further licenses thereunder.

3. The foregoing Order shall not operate to relieve any person upon whom an order requisitioning Platinum, Iridium and Palladium, or compounds thereof, may have been served, from any obligation imposed upon him by such order.

Platinum Section
C. H. CONNER, Chief.

WHAT THREATENED A DENTIST'S HANDS

By Watson W. Eldridge, Jr., M. D., New York City

In September, 1917, Dr. B——, who had just returned from a summer vacation, began to experience unusual sensations in his right little finger. They were located on the outside of the middle joint, and at first seemed merely like opposition to complete flexion. The feeling of opposition to flexion increased and more and more effort was required to bend the finger. A month or two later unusual sensations began to manifest themselves in the joint at the base of the first finger, and a slight feeling of stiffness followed.

Dr. B—— is a dentist, and is dependent upon the use of his hands for the practice of his profession. Anything which threatens their welfare threatens his income and is serious. He therefore took immediate steps to locate the cause of the trouble, with the hope of arresting it and perhaps of removing it.

The diagnosis in this case was rendered more difficult by the fact that the doctor was apparently in better health than for some years past, having just spent three months out of doors, during which time he had made considerable progress in recovering his health somewhat broken by too much work. For several months previous to the beginning of his vacation, the doctor had been upon a diet of vegetables and fruit. Desiring to get away from all connection with his routine work and to live out of doors as much as possible he had gone into the mountains, where it had proved very difficult to get vegetables, and his diet during this time had been largely of animal proteids, expecially bacon and eggs.

There being no local cause for this trouble with the finger it seemed plausible to regard it as an indication of some pathological condition which was otherwise hidden. The only course open to the physician in such a case is to begin at the beginning, and by the different forms of examination to seek for clues to the cause of the trouble.

As the doctor had been under close observation for several months previous to the commencement of his vacation, a good many of the questions usually asked at the beginning of an examination could be readily answered, most of them in the negative. It was known that he did not use any form of alcoholic stimulants and did not even drink tea or coffee. His meals were of the simplest, and with the exception of two months spent in the mountains, he had been for at least a year without meat and with only as much sugar as was cooked into food in the ordinary course of preparation. The usual tests for specific infection gave negative results. The action of the great eliminating organs, the lungs,

kidneys and skin were known to be normal; the bowel action was also normal.

The blood analysis gave the first clue to the nature of the trouble, and that was not very definite. When an analysis was made following the onset of this new trouble, it was found that the amount of uric acid in the blood had greatly increased during the summer, and the amount of creatinine was also much above normal. They indicated that the trouble might be in the retention by the system of waste products which should be eliminated, or in the production within the body, by bio-chemical processes, of excessive quantities of uric acid, and this in the face of the fact that a normal percentage of uric acid was being eliminated through the urine daily. The quantities of uric acid and creatinine retained in the blood were sufficient to constitute a distinct threat to the welfare of the entire physical system. It was evidently of the utmost importance to establish elimination in sufficient degree to reduce the waste products of the system to a normal amount and keep them there if possible.

Efforts to shut off the intake of food from which the excess of uric acid might be made amounted to nothing, because the diet was already practically all fruit and vegetables, and contained only a very small amount of the animal proteins and none of them rich in purin bodies (found in certain kinds of meat). Only two lines of activity seemed available, one to endeavor to wash the excess out of the system by copious water drinking, to effect which the doctor was directed to keep a glass of water always at hand and drink at least a glassfull an hour. The other was to secure enough outdoor exercise to secure deep breathing, good skin action, and healthy circulation. By the time this was determined upon the weather had settled into winter and few outdoor sports were available. The doctor therefore formed the habit of walking from his house to his office each morning, a distance of four miles and a half, maintaining a brisk pace all the way.

By the middle of the winter, the symptoms had extended themselves to the right elbow, which began to be sensitive when turned in certain directions. The doctor then joined a gymnasium and began to play squash, a form of indoor tennis. This, however, proved to be too violent and increased the discomfort in the right elbow, so it was abandoned.

Under the influence of the copious water drinking and the outdoor exercise, the doctor's health improved through the winter, with the exception of the particular trouble for which relief was being sought. The symptoms remained stationary, and alteration of the diet or amount of water intake exerted no more than a slight influence upon the amount of uric acid and the creatinine retained in the system. During the summer the symptoms practically disappeared, though a slight swelling

over the knuckle of the little finger remained. With the return of the cool weather of this fall, the symptoms have returned.

This case presents a number of features of interest to any man who has reached the age of 40 years, and who may begin to experience similar sensations, because it makes it possible to draw pretty sharply the lines between ignorance and knowledge on this particular subject, and to indicate what one may expect and why.

While some persons show a high percentage of uric acid in the blood with no trouble about the joints, and others have trouble about the joints without a high quantity of uric acid, so many persons present both the high degree of uric acid and the trouble about the joints that there is a well-founded suspicion that there is a relationship between them which cannot at present be established with any certainty.

Perhaps the most familiar form of joint trouble which is accompanied by a high percentage of uric acid in the blood is gout. This occurs in people who have what is known as a uric acid diathesis, and who are in the habit of living well. The symptomatology is very definite, and is confined to the area of the body below the knees. Evidently the doctor's trouble was not gout.

It was apparent that the doctor's trouble was not arthritis deformans, because only one joint was attacked, because during more than a year the trouble had not spread to other joints of the same hand but has remained nearly stationary, and because, so far as can be seen, there has been very slight change in the bony structure. It was impossible to classify the trouble with this joint under the heading of any of the usual effects of uric acid upon the joints. In spite of the fact that persistent efforts for more than a year have had little or no effect upon the percentage of uric acid retained or upon the joint trouble, and that the joint trouble had not grown much worse during the year, there is the belief that an unseen connection exists between the excess of uric acid and the trouble with the joint.

The failure to achieve any results in this case accentuates the need of a more extensive and definite knowledge concerning the formation and retention of uric acid in the system. It has long been believed that excessive quantities of uric acid were formed in the system only when the foods rich in purin bodies constituted a considerable part of the diet, or when the organs of elimination, the lungs, kidneys and skin do not function properly. Yet here is a case in which, after more than a year of the complete elimination of the foods rich in purin bodies in which water drinking has been copious and continuous, in which there has been a considerable amount of vigorous outdoor exercise and in which the lungs, kidneys and skin are known to function properly, where an excessive

quantity of uric acid and creatinine are retained in spite of every effort to remove them.

Dentists are not infrequently afflicted with some form of joint trouble. A blood examination may very probably show an excessive quantity of uric acid in the blood. If the trouble is gouty in nature, a change in the diet will reduce the proportion of uric acid and the symptoms will subside. If the trouble is arthritis deformans there is no remedy. If the trouble is like that which has afflicted Dr. B——, the course most likely to retard its progress is to drink copiously of water, to take plenty of outdoor exercise, even if other interests are made to suffer thereby, and to adhere to a diet in which there is a very small percentage of animal protein. The importance of all these elements can be seen from the statement that once a joint trouble has manifested itself, it is not likely ever to be really cured, and the best that can be hoped for is a suspension of progress.

A DAILY DUTY

Each day every American soldier in France is confronted by a great duty. Our Army there has a great task to perform for our country, for the world, for civilization, and for humanity. Our soldiers are doing their duty with a courage and fidelity and efficiency that thrill every heart.

Each day every American citizen at home is confronted by a great duty, a duty as imperative upon him or her as the duty of our soldiers is upon them. The American people have a great task to perform. It is to support to the limit of their ability our Army, our Navy, our country at war.

To work with increased energy and efficiency so that our national production may be increased; to economize in consumption so that more material and labor and transportation may be left free for the uses of the Government; and with the resultant savings to support the Government financially is the daily duty of every American. It is a duty that will be met by every American whose heart is with our soldiers in France, who glories in their courage and fighting ability and their success.

A CAUSE OF "MEAT HOLES" RARELY OBSERVED

By E. S. Ulsaver, D.D.S, New Rochelle, N. Y.

Often when a lower first or second molar has been lost and the other or others have moved up to fill in the space we find a "meat hole" between the second and third upper molars.

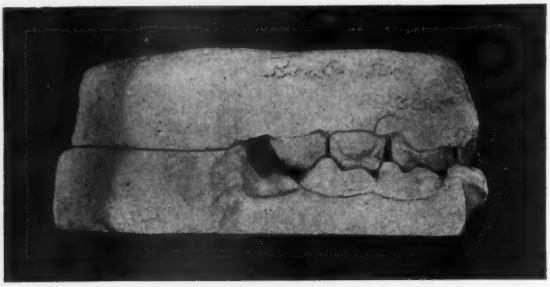


Fig. 1 illustrates the condition described in this article

The teeth, the upper second and third molars, on examination, will appear to be in approximation and have good contact. But under force of mastication the distal incline plane of the distolingual cusp of the lower will strike the mesial incline plane of the upper third molar, forcing the upper third molar back and the food between. When the force of mastication is released the third molar will spring back catching the food and making it very hard to remove.

This can be corrected by grinding off the offending cusps of both teeth. A like condition may be found in the lower when an upper tooth has been lost.

Fig. 2. Showing the models separated. The embrasure receives the meat fibres and the opposing cusp acts as a plunger.

87 Centre Avenue.

THE CRIPPLE IN DENTISTRY

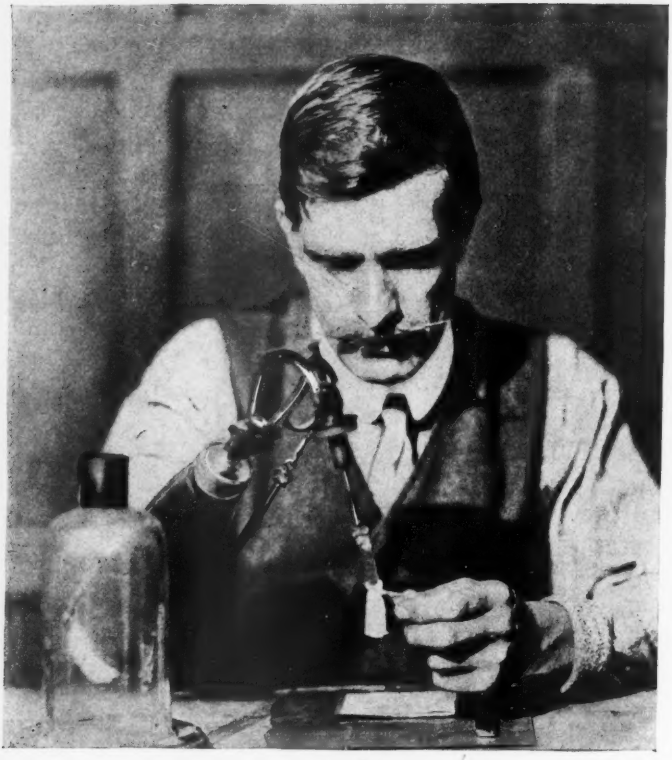
By Rica Brenner

Next in immediate importance to winning the war itself, comes the matter of reconstruction after the war; and not the least important phase of this matter is that of the employment of labor in general, and of the returned soldier in particular. The cripple is a big problem, but one not incapable of solution. Nor does the solution depend upon emotions, whether those of charity or of patriotism alone. The problem is being solved by training these disabled men to take their place again in the industrial world, depending for employment not upon others' sympathy but upon their own ability; and by showing the employers of labor that the disabled man is an effective worker.

According to the vocational rehabilitation act recently enacted by Congress, those disabled in the military and naval forces of the United States have been placed under the joint authority of the Surgeon General of the Army and the Federal Board for Vocational Education. The Surgeon General has jurisdiction from the time the person is injured until he is restored to good physical condition, when he receives his honorable discharge from the service. The Federal Board then offers him vocational reëducation and training which will enable him to return to useful employment, and the U. S. Employment Service will find him a job.

When once the employer has become aware of this fact, he may then question himself as to the fields within his own interests in which the disabled man can be made a competent worker. The printer wonders whether he can employ a man who has lost a leg or an arm; the jeweler wonders whether his trade can use such a man; the dentist wonders whether dentistry has a place for him. To these employers, and to countless others, the question is answered affirmatively; the crippled man has been effectively employed. To the dentist, in particular, the answer is "Dentistry has a place for the disabled in your own laboratory as a dental mechanic." Already in England mechanical dentistry has been selected by the Ministry of Labor, the Ministry of Pensions, and a Trade Advisory Committee as one suitable to the disabled soldier, and training in it is being given.

Naturally enough, not every disabled man can be trained to take an effective place in this occupation. Certain inherent qualities both in the cripple and in the man with all his capacities are necessary. The preliminary work in learning certain technical processes, like the handling of plaster of Paris as used in casts, the melting and casting of metals, the fitting of sheet metal to irregular surfaces, wax modeling, adaptation of



Laboratory Attendant (Eloir College)

porcelain teeth to the needs of individual cases, requires patience and application. The work in the dental laboratory of making dentures, crowns for natural teeth, splints for fractured jaws, and whatever other dental appliances are needed for individual patients requires intelligence and delicacy of touch. Mechanical aptitude is necessary; and in the case of reëducation, the capacity for acquiring skill in handicraft must not be lost because of age or of previous occupation. These qualities are essential to any one desiring to become a dental mechanic; in the case of the returned soldier, still under government supervision and trained by an authorized and competent agency, the opportunity to show and to have tested these qualities is provided for in the early study and examination of the candidate for training.

Besides these general demands, others confront the man who has suddenly become disabled. Not every man who once possessed mechan-

ical ability or natural capacity can be retrained for this trade. Unlike some other industries requiring manual labor, this industry has no place for the arm-cripple; the use of both arms and wrists is necessary. However, the loss of a few fingers need not necessarily disqualify a man if he has the full use of the thumb and first two fingers of the right hand and of the thumb and first finger of the left hand, so that with each he can exercise a firm grip; he may become an efficient worker. But in view of these facts, it is to the leg cripple rather than the arm cripple, that this industry is of the greater importance. In the first place, the work is indoor work much easier for and better suited to such a man than work that would keep him out-of-doors. Then too, the work is largely done sitting, and while a little walking and standing may be required, still these are things which the trained cripple early accomplishes.

And so, not only is there nothing in this work making it impossible of performance by the disabled man, but there are in it attractions making it particularly desirable. The man who has previously done mechanical work can take up a trade akin to his old one with the smallest loss of ability due to interrupted activity or to difficulty in learning a strange trade. It is a trade, too, which demands a certain variety of technique and this variety eliminates in part that monotony which the newly disabled man dreads as his future. It offers, besides, the opportunity for the play of ingenuity. This the disabled man possesses in a high degree; for, as compensation for physical loss, his remaining powers are invariably sharpened. In seeking to do something in a new and unaccustomed way his intelligence is quickened and ingenuity increased. Furthermore, because the dental mechanic does not as a rule work under constant supervision, but is allowed to use his own resources, this occupation makes for his initiative and self-reliance. Because he is generally employed in a small office and by an individual dentist, rather than in a factory and by a corporation, the dental mechanic is thrown into contact with those who are interested in his work and in himself. He realizes that the fact of his being a cripple does not necessitate his exclusion from social intercourse and does not mean that nobody wants him in industry. This realization that there is a place for him that he can ably fill is perhaps not the smallest joy that can come to him.

There is a cripple characteristic that will be seriously considered by all employers in the dental profession. These disabled men are as a rule a serious and hard working lot, doing whatever they attempt with a commendable thoroughness. They are not the sort of men who, having obtained a smattering knowledge of a profession, set up as qualified practitioners. If a retrained cripple should decide to go into dentistry for himself, it would be because he has completed a course and is qualified.

The retraining schools make it a point not to turn out a man until he is highly qualified for what he intends to do. And this thorough training is effective in creating in the men a wholesome respect for their chosen work.

The Red Cross Institute for Crippled and Disabled Men, 311 Fourth Avenue, New York City, is anxious to interest the employer class in the advantage of using disabled men. Detailed information on any point not made clear in this article will be gladly furnished by the Institute on request.

ALUM IS USED IN REMOVING GERMS FROM WATER

By using filter alum in rapid sand filters good results are being obtained in reducing the bacterial content of the well water at American mobilization camps in France, says *Popular Mechanics*. The chemical coagulates on the sand at the top and forms a film to which the bacteria adhere as the unpurified water trickles through the bed. At regular intervals the upper surface of the sand is replaced and a fresh supply of alum introduced.

THE COLD STORAGE CURE

Dr. O. J. Bennett, city physician of Pittsburgh, said the day of sniffles and sorrows would pass with any hay fever victim that would spend half an hour each day for a week in a dry freezer—refrigerating plant, etc. Hay fever disappears with frost and this treatment was on the same principle as equipping the hen house with Mazdas and turning on the juice at midnight. The artificial sun is said to coax two crops of eggs per day; why not fool the hay fever with the artificial frost?

WE NOW KNOW

That Mental Power depends upon the correct use of the senses, and that this cannot effectively operate unless regard is given to the laws of health. The Body is the Engine House. The Brain is the Dynamo, from which issue thoughts and feelings. Success in life has its origin here, not in luck, but in obedience to the laws governing the operations of the human machine. Mental Mechanics are founded upon principles as axiomatic as the fundamentals of Mathematics—he alone is wise who keeps the Law.

PREPAREDNESS LEAGUE OF AMERICAN DENTISTS

Notes and News

Communication from the President. Our Director-General is planning to give, through the members of the League, free dental service to such families of soldiers, sailors and marines as shall be found worthy by the Home Service Department of the Red Cross.

This is a most commendable activity of the League and should be supported by its entire membership. Only necessary service will be rendered, with special reference to children and expectant mothers who will, doubtless, make up the greater precentage of cases requiring treatment.

It is possible that some members of the League may not be in full accord with this plan but to such I would say that we have thus far undertaken no more necessary nor worthy activity. Suppose that you were in the tenches more than three thousand miles away from your wife and your children who were left without sufficient support, suffering far more than yourself, in patience and silence. Would you not be cheered and thankful to know that skilled dentists stand ready to give them the best service within their power? Would it not fill your heart with thanksgiving and make your cross easier to bear?

Then, for the sake of your conscience, your love of your own flesh and blood, do not advance a single argument against this great work, but add it to your already overburdened duties and the blessings of real sacrifice will be yours throughout your lifetime. It is far better to sacrifice than to regret. Now is the time when every ounce of skilled energy must be utilized to the glory of our flag, our profession and humanity. All true Americans are learning to give and to sacrifice and surely no more worthy objects can be found than the wives and children of the men who are making the supreme sacrifice that our beloved country may remain clean and fit for the living as well as for the myriads yet to be born.

The Red Cross and the Dental Motor Car. The Red Cross will accept and ship to France all dental motor cars turned over to the Government by the League, and promises that they will be used for care of the soldiers

only. With this assurance the League is ready to begin active work in supplying them as rapidly as possible.

Members of the Dental Corps in France are anxiously awaiting their arrival and we have many letters urging us to get the cars over there as there is the greatest need for them. Commanding officers have promised co-operation and it is now up to the League to supply the demand.

Fifteen cars have been completed, some of which were ordered by the Italian Government for child welfare service. No development has created greater interest in our profession, especially by the public, than our dental motor car.

Let every organized body of dentists plan immediately to raise money for this purpose and I suggest that the officers write Dr. S. Marshall Weaver, Chairman, 620 Rose Bldg., Cleveland, Ohio, for full instructions.

This matter is vital, therefore urgent.

Our Instruction Course. Conditions generally in the educational department of our profession have been so unsettled while undergoing the changes subsequent upon militarizing dental institutions that those in charge of arranging a course of instruction in war oral and dental surgery have been unable to make definite arrangements in this most essential matter.

In the meantime, data is being compiled, plans formulated and co-operation of instructors gained so that when the word is given to proceed we will be ready for action. The situation has worried your President greatly as he has endeavored to establish a reputation for the League of accomplishing every good object undertaken and it is no idle assurance to say that we are on the job to see this object a big success.

Reclaim. Colonel Logan asks all League members to reclaim men dentally defective and put them in Class 1 A. We will back him up in this and do our bit to make an army of millions thoroughly effective.

J. W. Beach, *President.*

AMERICAN RED CROSS DENTAL AMBULANCES

And now they are utilizing dental ambulances in France, that American soldiers may have healthy mouths, with consequent good digestion and health. The first two of these dental ambulances on record were equipped through the efforts of Mrs. William Boyce Thompson and given through the American Red Cross to the Dental Department of the United States Army.

These ambulances have all the appurtenances of the modern dental

office, with the added advantage of being able to visit the patient in all sorts of out-of-the-way places. They consist of a main operating room and two good-sized tents. Every contrivance approved by the dental profession is installed in the ambulance.

In the centre room, or office proper, is a complete dental outfit, with separate bracket for instruments, electric engine, fountain cuspidor, pressure tank with syringe and sprays, hot and cold water faucets, steam sterilizer, filter, vulcanizer, electric lathe, blow pipe, nitrous oxide and oxygen gas apparatus, sanitary cabinet for instruments, a full set of forceps and duplicate sets of instruments. There is even a typewriter for office record use.

The car is lighted by electricity generated by batteries especially built for the ambulance. Should they fail, provision is made for acetylene gas lighting.

When the car is in transit a field outfit, which closes up in three containers, is stored in the office. This is set up as soon as the car is ready for service. On either side of the office is a tent, one used for the field outfit; the other is converted into sleeping quarters or it may be used as an adjunct operating room.

While dental treatment is being given in the office, one of the tents may be used for the more difficult operations. The car is manned by a crew of two officers, two dental assistants and a chauffeur. In hot weather the sides of the tent may be rolled up, insuring all possible ventilation.

One of these ambulances is in active service at Camp Upton, the other at Camp Greenleaf. In all camps, newly arrived draftees carry with them trifling ailments—measles, mumps, and the like. The men are quarantined and as they cannot go to the dentist, the dental office honks up to them.

Camp Meade also has a dental ambulance, the gift of the Cleveland Unit of the Preparedness League. The Connecticut Unit provided funds for another which is going to France to serve our boys at the front. The Red Cross has thirteen of the dental ambulances, either completed or in process of construction. Three of them are for service in France and the other ten (three dental ambulances and seven baby saving trucks) are on their way to Italy. All thirteen will go "over there." The Red Cross considers that the work among the babies and children of the war-swept lands will do much to rehabilitate future generations.

In order to continue this work and to provide for the greatly increased number of men who were sent overseas monthly, the Red Cross will need the united support of the American people, that its misssion of mercy and humanity may not be halted. For that reason the Red

Cross will hold its second annual Christmas roll call during the week of December 16th to 23d, when, it is hoped, every American man, woman, and child will place his or her name on the Red Cross roster. Last year 22,000,000 adults and 8,000,000 children responded to the call and took a nation-wide pledge to stand squarely behind the Flag in our war for justice and liberty for all.

The above paragraphs, under the heading, "American Red Cross Dental Ambulances" is a matter which has been received direct from the Publicity Bureau of the Eastern Department of the Red Cross. It is therefore authentic. All League officers are requested to have this published in their local newspapers during the next Red Cross Drive, which will begin December 16th.

R. OTTOLENGUI, *Director of Publicity.*

I AM THE CAPTAIN OF MY SOUL

Out of the night that covers me,
Black as the pit from pole to pole,
I thank whatever gods may be
For my unconquerable soul.

In the fell clutch of circumstance
I have not winced nor cried aloud;
Under the bludgeonings of chance
My head is bloody, but unbowed.

Beyond this place of wrath and tears
Looms but the horror of the shade,
And yet the menace of the years
Finds and shall find me unafraid.

It matters not how strait the gate,
How charged with punishments the scroll,
I am the master of my fate,
I am the captain of my soul.

SOME BOOK

Livingston told of the natives in Africa offering a big price for a book he was reading. They did not comprehend reading and thought the book, at which he gazed so long, must be "eye medicine."

PRACTICAL HINTS

This department is in charge of Dr. V. C. Smedley, 604 California Bldg., Denver, Colo. To avoid unnecessary delay, Hints, Questions, and Answers should be sent direct to him.

SURFACING A PLASTER MODEL.—Pulverized soap stone rubbed on a plaster model with a finger gives the model a smooth, polished finish as smooth as smooth glass or chinaware.—*Dental Review.*

A GOOD SEPARATING MEDIUM FOR PLASTER IMPRESSIONS.—Having tried many of these, I have found none so quick and satisfactory as a solution of paraffin wax in petrol (gasoline). It is clean to handle, always ready, and the impression can be painted over and cast within a few minutes of being taken.—*Ash's Journal.*

TO AVOID AIR BUBBLES IN PLASTER CASTS.—After coating impression with separating medium apply a moderately thin mix of plaster to the entire surface of impression with a ½-inch oval paint brush (not camel's hair). When coated, immediately immerse brush in a glass of water, and finish pouring cast in usual manner. This avoids jarring of impression with probable fracture or distortion. Allow brush to remain in water. When necessary to use it again the plaster will shake or jar out readily and brush is as clean as when new.—*Dental Review.*

QUESTIONS AND ANSWERS

Editor DENTAL DIGEST:

May I ask Dr. V. C. S. what he recommends for the destruction of vital pulps, in preference to arsenical preparations?

Answer.—I practically never devitalize a pulp any more unless it is not only exposed but diseased. In which case use either cocain or novocain pressure or injection. A few years ago, however, I devitalized a great many teeth with pressure anaesthesia. To do this: Cut through the enamel with a small stone at a point where you can get contact with sound dentine in a direct line toward the pulp, the shorter that line the

better; e. g., a point labially or buccally close to the gum margin. Drive a pit into the dentine with a small bud shaped bur. Moisten the pit with a saturate solution of cocain in adrenalin chloride, and apply piston pressure with unvulcanized rubber and a small stiff plugger. Or, preferably, with a short hard guttapercha point that has been stuck to the end of a plugger that is the exact diameter of the bud bur used. The guttapercha point is now warmed very slightly, and steady pressure is applied to the pit in the dentine moistened with cocain solution. It is seldom necessary to repeat this more than a couple of times (drilling a little deeper each time) until the pulp can be penetrated without pain. The chief value of this technic in a modern dental practice is in desensitizing dentine for cavity preparation, and not in carrying it to a point of pulp exposure or devitalization.—V. C. S.

Editor of DENTAL DIGEST:

I am taking the liberty of writing you about a case that is giving me some trouble.

I have four or five patients who have abraded surfaces at the gingival margins of their teeth, just small places, no decay but very sensitive to cold, heat and acids.

Can you tell what to do with them?

DR. G. S. MOFFATT.

Answer.—Dry these surfaces and paint posterior with saturate solution of silver nitrate; anterior with chloride of zinc and burnish with burnisher or electro-cautery, increasing heat gradually until quite hot. Repeat a time or two at two or three-day intervals, if necessary. —V. C. S.

Editor DENTAL DIGEST:

Please answer through "Practical Hints," DENTAL DIGEST, how ammonium fluoride (granular) can be prepared to remove stains from enamel? Please omit criticism of the agent for such purposes. I would like to have the practical information. This is something that I don't know, but I expect to get the information from someone.—J. D. H.

The S. S. White

Standard Pointed-Pin Facings

Why "Standard"? Because the crown-and-bridge worker finds in them the characteristics necessary to his work in a degree of perfection not to be found elsewhere.

What are those necessary characteristics?

First—a porcelain with a translucence that gives it a vital appearance in the mouth under natural or artificial light; strength to withstand the strain of mastication; heat resistance, that enables them to pass through soldering temperatures without change of color or checking; a texture that lends itself to repolishing after grinding; a variety of forms and shades that make selection easy.

Second—Pins that facilitate the placing of the backing and assure its retention; with points that pierce the backing readily; with sufficient rigidity to stand up when forced through the backing, yet that can be bent when required; with a fusing point high enough to pass through any gold soldering heat unchanged.

These are basal requirements. S. S. WHITE POINTED-PIN FACINGS possess them all abundantly. They have also special characteristics, little details of refinement that clinch their value by greater assurance of perfect work. The smooth flatness of the backs of the facings and the sharpness of the edge contour facilitate the close co-aptation of the backing to porcelain. The pins are remarkably smooth and regular in form, the same size from the head to the taper of the point, without shoulders or ridges to distort the holes. Consequently the holes fit the pins snugly and solder has no chance to pass.

These are some of the reasons why S. S. WHITE POINTED-PIN FACINGS afford a standard. They fill in fullest measure the needs.

S. S. White Pointed-Pin Facings - Singly $0.50

Illustrated Folder showing Complete Line of Molds free on request

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Is Asepsis Necessary

in Dental Operations?

Is cleanliness necessary or is infection dangerous? So far as it is necessary to avoid any possibility of the operator *carrying infection from one mouth to another* certainly it is necessary to observe the rules of asepsis as rigidly in dental operations as in general surgery, and it is equally certain that there is far too little attention given to this by a great number of dentists. No sweeping assertion should be made, for there are dentists who operate with every care for the observance of aseptic methods and their number is increasing steadily. The better class of people demand it.

Consistent surgical cleanliness might be a better way of putting it, and it must be *consistent* throughout. Starting every operation with clean equipment, hands, instruments, a clean paper cover on the operating table, a clean waste receiver, everything surgically clean that could carry infection from the previous patient. Disease germs of most serious form may have been present, you cannot tell when or where to suspect them.

In has been our study since the early days of aseptic surgery to supply the dental operating room with surgically clean absorbent preparations and with appliances that assist in the observance of aseptic methods, Aseptic Dental Napkins, Cotton Rolls, surgically clean Cotton and Bibulous Paper, Aseptic Paper Covers for the bracket table, Sanitary Waste Receiver, Aseptic Cotton-Font and similar articles.

If you are not familiar with all of them write for free samples and how to use them.

JOHNSON & JOHNSON, NEW BRUNSWICK, N. J., U. S. A.

BE SENSIBLE

Don't park your Gold Scrap on the front of your coat or on the floor.

Get a DAVIS GOLD DUST CATCHER

If you had a hole in your pocket that your loose change was slipping through, you would get it fixed, wouldn't you? Well you have got a hole in your pocket alright if you are allowing any part of your grindings from Bridgework or Inlays to be lost.

The Davis Gold Dust Catcher, engine size is made to hang from the front of your operating coat. It is just large enough to admit your hands freely like a muff. It weighs only a few ounces. Is quickly adjusted. Made of light metal nickel plated and has glass front and top. Prevents dropping of small articles on floor. Keeps small particles from flying and *retains all the gold* which may be removed through a small hole in the top.

We also make a Lathe size that may be used on either end of the spindle.

Send for literature. It is worth looking into.

THE W. M. SHARP MFG. CO. Inc.
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An Earnest Appeal to the Dental Profession

Service Is Still Essential

Our Boys are giving their lives. What sacrifice are you making? You can at least give an hour a day of free dental service. As man power will be the determining factor, how better can we serve the cause than by making our Boys dentally fit?

If you are not already a member of the Preparedness League of American Dentists, sign today this Application Blank, cut out and mail with $1.00 to Dr. L. M. Waugh, Treasurer, 50 East 42nd Street, New York City.

APPLICATION BLANK

to the

PREPAREDNESS LEAGUE OF AMERICAN DENTISTS

Being an ethical dentist, I hereby make application for ACTIVE MEMBERSHIP in the Preparedness League of American Dentists, which entitles me to all the benefits and privileges of the organization.

Enclosed find $1.00 (One Dollar) membership fee, including official button. No dues or assessments.

Signed.....

Please write name and address plainly .....

Inclose professional card.

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MAKE CHECK PAYABLE TO L. M. WAUGH, 50 E. 42d St., New York City

The Way To End Infection Troubles

in
PYORRHEA,
ABSCESSES,
EXTRACTIONS,
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and all other
PATHOLOGICAL
ORAL CONDITIONS
is to irrigate all parts freely with

NUKLORENE SOLUTION

(DAKINS ANTISEPTIC)

One NUKLORENE TABLET dissolved in an ounce of water makes a one per cent solution.

A one per cent solution will clear up your old troublesome cases in no time. Its marvelous germicidal action is instantaneous but non-toxic, non-caustic and non-irritant.

ONE OUNCE OF SOLUTION
OF THE PROPER STRENGTH
COSTS YOU BUT ONE CENT

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PHILADELPHIA, PA.

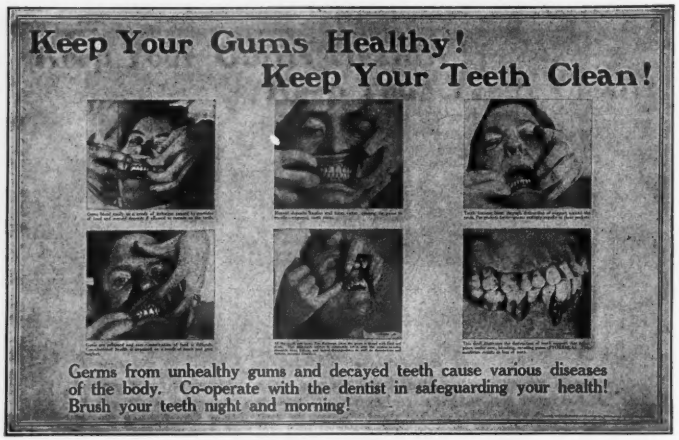
Every Dentist in the U. S. Army

looks after the welfare of approximately one thousand soldiers —to keep them dentally fit. It is a tremendous undertaking when it is considered that eight hundred soldiers out of every thousand have had practically no education in oral hygiene before entering the service.

The U. S. Army dentist is producing wonderful results in educational work. The dentist at home can be of service to the army dentist to that still greater results may be accomplished.

How?

By educational propaganda in every community—teaching the men who are about to enter the army, the importance of oral cleanliness, sound teeth and firm gums.



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A SUGGESTION TO YOU

Arrange to place one or more copies of the large educational wall-chart shown above (size 38x25 inches) in factories, institutions and schools in your immediate neighborhood. The chart is FREE and contains no advertising—it is purely educational. Thousands are already in use, with marked effect on the public mind, in creating a greater appreciation of dentistry, and tooth care.

Write for the number of FREE charts you can place to advantage (all charges prepaid)

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Kerr Perfection Impression Compound

You will never appreciate how uncertain and unsatisfactory a task it is to take a full upper or lower impression by the old guess method that is generally used until you have mastered the art of taking a test impression with Kerr Perfection Impression Compound.

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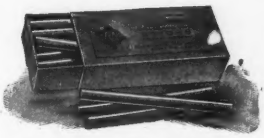

Kerr Perfection Impression Compound Sticks

Test Impression taken in Kerr Perfection Impression Compound Showing Complete Muscle Trimming

In taking an impression the three main points to be attained are: (a) the correct height and length of the finished plate; (b) an equal strain on the stationary hard and soft parts of the covered mouth at about the pressure at which the plate is to be worn; (c) room for the movable parts to move, without leakage, that is, relief-without-leak in muscular motion.

Booklet giving information relative to the Greene System of Impression taking with Kerr Perfection Impression Compound sent upon request.

DETROIT DENTAL MFG. COMPANY
DETROIT, MICH., U. S. A.

Save the *Thoughtless* Dollars

"I got the sweetest hat to-day. And, my dear, of course, I didn't really need it, but—"

* * * *

"What if it is only a few blocks? Here, taxi!"

* * * *

"I know I'd feel a lot better if I ate less, but I simply must have a big order of ."

* * * *

Over there in the Picardy mud, pock-marked with significant craters and "plum-caked" with unspeakable things that once were men, our soldiers can't hear all that some of us are saying. Good that they can't, isn't it?

* * * *

It isn't that we Americans are a selfish people. We have simply been thoughtless.

Money is needed to finish this war—let's give it. So far, we have been asked only to lend—to lend at a good round 4% interest. Turn your THOUGHTLESS dollars into War Savings Stamps.

W.S.S.
WAR SAVINGS STAMPS
ISSUED BY THE
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THE DENTISTS' SUPPLY COMPANY, NEW YORK

Martin's Pyorrhea Treatment

Tones, Invigorates, Stimulates

A cream applied by the dentist

A powder for home treatment

You Get Results

When the Cream is applied and massaged into the tissues affected, it is not quickly neutralized by the secretions of the mouth, but is absorbed by the tissues. Consequently, the medicinal effect is much more lasting than if a fluid were used. This is one of the reasons why results are obtained so quickly.

Another reason is that the patient cooperates with the dentist by using the Dentaline (powder) two or three times a day, thereby giving himself a treatment at home.

Non-Secret—The elements combined in this treatment are published.

If you are not satisfied with results after a 30-day trial, what is left of the Outfit may be returned for full credit. You have nothing to lose and everything to gain. *Send for Outfit to Try.*

PRICES:

Martin's Pyorrhea Treatment Outfit ..... Consists of one (1) small jar Cream, six (6) Applicators, six (6) cans Dentaline (for home treatment), one (1) Martin's pyorrhea Syringe and one (1) tube	**$7.75**
Martin's Pyorrhea Cream, per small jar	2.00
Martin's Pyorrhea Cream, per large jar	3.50
Martin's Dentaline (for home treatment) per dozen cans	6.00
Martin's Pyorrhea Syringe and Tube	2.75
Tube only for Martin's Pyorrhea Syringe	.75
Applicators (for use with Broach Holder) per package of six (6)	.50

NOTE—The large size jar of Cream is not included in the outfit. Dentaline, the home treatment, if sold to the patient, is 75c per can.

Dealers Everywhere

The Ransom & Randolph Company
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We Sell Redistilled Mercury at $3.00 per Pound

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$crap Gold
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We are authorized by the Bureau of Mines to purchase scrap platinum.

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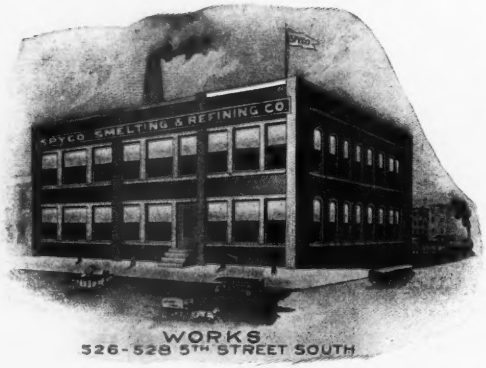

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AN EXCLUSIVE FEATURE

The Self-conforming Back

The back of the Ritter chair is designed to conform to the body when reclined so that no re-adjustment of the headrest is necessary.

The Ritter Dental Mfg. Co.

of Rochester, N. Y.

A COMPARISON of the strength of amalgam made from Crandall's Scientifically Tested Non-Zinc Alloy with the strength of an amalgam containing zinc

Crandall's Alloy 437.5 lbs.

Sixteen specimens of amalgam made from Crandall's Alloy amalgamated with correct proportions of mercury and thoroughly condensed, according to Crandall technic, had an average crushing strength of 437.5 pounds.

Crandall's after heating 387.5 lbs.

The same number of specimens subjected to a temperature of 150° F for 35 minutes (corresponding to the effect of hot foods and drinks over a longer period) lost about 50 pounds, or about 11½% of the original strength.

Zinc Alloy 352.5 lbs.

Sixteen specimens of amalgam made from an alloy containing zinc, amalgamated and condensed according to the technic advocated by its manufacturer, had an average crushing strength of 352.5 pounds, about one-fifth less than Crandall's.

Zinc Alloy after heating 202.5 lbs.

The same number of specimens of this amalgam (containing zinc) when subjected to a heat treatment of 35 minutes at 150° F had a crushing strength of 202.5 pounds, a loss of 150 pounds or about 42% of its original strength.

From a series of tests of amalgam made by Dr. H. A. Merchant.

CRANDALL'S SCIENTIFICALLY TESTED NON-ZINC ALLOY

is absolutely free from zinc, a deleterious ingredient which not only reduces the strength of amalgam, but is largely responsible for pitting and corrosion of amalgam restorations, and for galvanic shock.

Crandall's Scientifically Tested Non-Zinc Alloy, free from zinc, dated, tested, and certified, is made in the laboratories of

The Cleveland Dental Mfg. Co.
Cleveland, Ohio, U. S. A.

American Business—Attention!

The First of Every Month

will be observed as

Thrift Stamp Day In The U. S. A.

The first Thrift Stamp Day went over big! It proved a tremendous boost for Uncle Sam's Thrift Stamps and War Savings Stamps campaign and for American business in general. As a result of the great success of the first Thrift Stamp Day it has been decided to make the First Day of every month Thrift Stamp Day in the U.S.A.!

This means that every branch of American business has the unusual opportunity to make the first of every month a *red letter business day* throughout the Nation, and a *Victory Day for the U. S. Government* by disposing of hundreds of thousands of dollars' worth of Thrift Stamps and War Savings Stamps!

So get busy at once in preparation for these red letter business days—these monthly Thrift Stamp Days! Manufacturers, jobbers, wholesalers, retailers, get together and plan for special Thrift Stamp Day sales, unusual values in every line of merchandise and commodity. It's up to you to help the Government and help yourselves at the same time.

Profit by your experiences of the first Thrift Stamp Day to make the succeeding Thrift Stamp Days still more of a success! Redouble your former efforts and you'll double the results! If any of you should still be unfamiliar with the working plan for Thrift Stamp Day, write for this plan *to-day without fail.* Address W. Ward Smith, National War Savings Committee, 51 Chambers St., New York City.

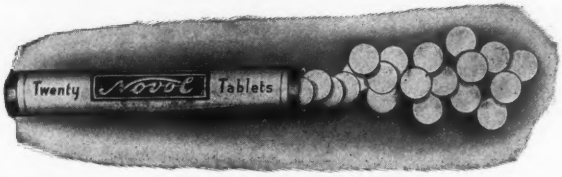
National War Savings Committee

51 Chambers Street, New York City

This space donated by The Dentists' Supply Co. of New York

For Every American Soldier in France!

Government approval of



Novol PROCAINE TABLETS

is manifested by orders on our books for 2,120,000, enough to provide one tablet for every American soldier in France.

If you could have been present at the practical and laboratory tests made by the Inspection Department of our Government before Novol tablets were adopted, you would have seen every claim substantiated.

Novol Procaine-Suprarenal Extract tablets have met and meet every dental requirement for an absolutely safe and efficacious local anesthetic, from simple extraction to the more complicated and involved operations in plastic surgery.

To insure getting the genuine you must specify

Novol Procaine-Suprarenal Extract Tablets

(N. P. T.)

and obtain a product which is 100% efficient and 100% American.

Novol Procaine tablets are supplied in different combinations with Suprarenal Extract N. P. T. No. 1 (Dental) contains Procaine 0.02 gram, Suprarenal Extract 0.000045 gram.

Tubes of 20, 55c. **Vials of 100, $2.50**

Your dealer will supply you

Novocol Chemical Mfg. Co.

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Literature on request

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	Regular Price	Bargain Price
1 Ritter type No. 10 Electric Engine, Suspension type, all cord, for 110 volts, 60 cys., less hand piece. Rebuilt and refinished. Looks like new.....	$150.00	$100.00
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1 Ritter type No. 1 Electric Engine, Suspension type, cable for 110 volts, direct current, less handpiece. Rebuilt and refinished. Like new.....	140.00	85.00
1 Ritter type No. 11 Electric Engine, Suspension type, all cord for 110 volts, direct current, less handpiece. Rebuilt and refinished.....	150.00	90.00
1 Electro Dental Register type all cord Engine; 110 volts; direct current; good running condition.....	120.00	50.00
1 Morrison Chair, maroon plush upholstery.....	75.00	30.00
1 Pelton & Crane Air Compressor Unit for 110 volts, direct current. Perfect shape..	90.00	60.00
1 ElectroDental Air Compressor Unit for 110 volts, direct current. Overhauled and put in perfect condition, with case.....	100.00	55.00
1 Clark new model Single Bowl Cuspidor, complete — etched bowl; finger bowl; new.....	52.50	42.50

THE DENTISTS' SUPPLY COMPANY
220 West 42nd Street, New York

Mail Us That Scrap Gold To-day

Government Restrictions on Dental Gold Removed

We wish to thank all the Dentists and Dental Dealers for their coöperation with us in complying with the orders of the War Board curtailing the use of Gold in Dentistry.

The restrictions have now been removed and we can obtain all the bullion necessary for our trade.

There's a Williams Dental Gold Product for Every Purpose

You can now obtain Williams Dental Golds the same as heretofore. Ask your dealer about the following Williams Products if you are not already using them:

Williams Mat Gold, the "1000" fine gold that saves time in using, producing a filling of maximum density and wearing qualities.

Williams Ready-Made Lingual Bars. Made in both solid Gold and Gold Plated. The original ready-made lingual bars. They are properly bent, contoured and semi-adjusted so that with very little manipulation will fit any case.

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WILLIAMS

Victory!

THE word carries a thrill. It touches our fondest hopes, our deepest purpose, our pride in doing our part. It spells freedom, prosperity, a clean and decent world to live in.

Buy Bonds to Your Utmost!

LIBERTY LOAN COMMITTEE
Second Federal Reserve District
120 BROADWAY, NEW YORK CITY

Space donated by The Dental Digest

Steel Cabinet No. 110

At last a steel cabinet is offered for sale with all of the advantages of the wood models and some advantages of its own.

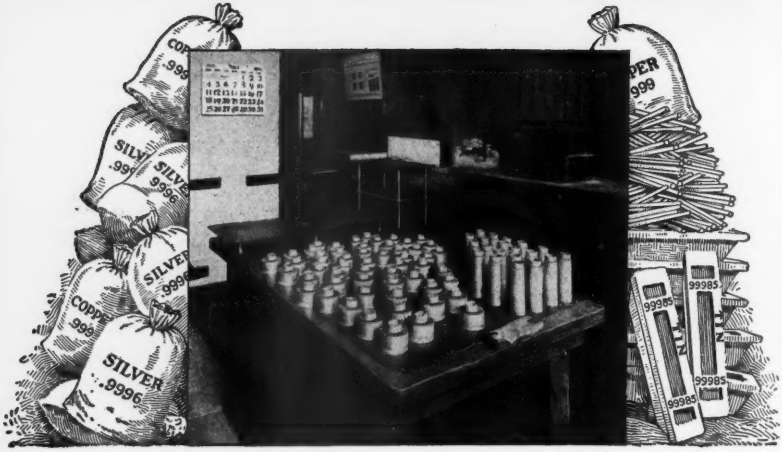
If interested ask for our circular just issued

Recent Sales

163 to United States Army 160 to United States Navy

The American Cabinet Co.

Two Rivers, Wis.



4125 ounces of True Dentalloy fresh from the ingot-molds—note how clean the ingots are

Absolutely Pure Metals

NO alloy can be produced with greater care and skill than True Dentalloy. The selection of the purest metals, the constant balancing of the formula, the fusing, cutting and annealing are surrounded by scientific safeguards that assure dependable quality in the finished alloy.

True Dentalloy is tempered, its qualities are fixed, it amalgamates readily, packs dense under the plugger, sets hard with ample edge strength and is entirely free from shrinkage. A slight initial expansion locks the filling in the cavity so tightly there is no space for bacteria to enter and cause recurrence of decay.

True Dentalloy—Every ounce a Standard of quality

Sold in Filings and Shavings, Medium and Quick Setting, One and Five-ounce Bottles

Single ounce	**$2.25**
5 ounce lots, per oz.	**1.75**
10 " " "	**1.65**

(Prices subject to change without notice)

YOUR DEALER WILL SUPPLY YOU

Sample with descriptive booklet free on request

The S. S. White Dental Mfg. Co.

"Since 1844 the Standard"

Philadelphia

TRADE TRUE MARK REG. IN U.S. PAT. OFFICE

The GREATEST MOTHER in the WORLD

holds a sacred place of honor within our homes and in our hearts

THE message that the American people stand as one behind our brave boys and gallant Allies, is the most cheerful "Merry Christmas" we can send them.

Let us make this a Red Cross Christmas —let us see to it that every member of every family joins the Red Cross. She is warming thousands, feeding thousands, healing thousands from her store — the greatest Mother in the World.

All you need is a Heart and a Dollar

RED CROSS CHRISTMAS ROLL CALL

December 16—23

Contributed through Division of Advertising

United States Gov't Comm. on Public Information

This space contributed for the Winning of the War by

DENTISTS' SUPPLY COMPANY

Dental Engineering

Many arts and sciences are contributing to the scientific side of our calling.

Engineering principles can be used to advantage in determining the form and dimensions of the dental arch of any individual requiring orthodontic treatment.

Appliances to move teeth can be designed by engineers. The appliances can be operated by dentists, the exact changes of appliance form being made on the engineering plan by the dentist.

Maps of Malocclusion

From accurate models maps can be made showing the positions of the teeth of both jaws *at once* in their malocclusion.

Contour lines of the palate can be drawn making it possible to construct precise cross sections of same; these sections made before and after treatment will show change of palate forms.

Arch Predetermination

From accurate models, a map of the teeth, as they will appear in occlusion, can be made in *advance* of orthodontic treatment.

Book of Plans

A book of plans can be made by combining the maps of malocclusion and occlusion, that will show the relative movements required to change the teeth from malocclusion to occlusion.

Orthodontic Appliances

Appliances may be selected by consulting the book of plans.

Appliances may be designed by considering the required movements as shown in the book of plans.

Teaching Possibilities

Colleges may avail themselves of this method for use in their teaching and clinical departments. A graphic method of demonstrating occlusion to the student, a scientific record of infirmary work.

Orthodontic Surveying

A PROFESSIONAL SERVICE
FOR DENTISTS
BY PROFESSIONAL MEN

The undersigned are prepared to do orthodontic surveying for dentists and dental institutions, and to furnish books of plans showing

1. **Maps of the Malocclusion.**
2. **Maps of the Occlusion.**
3. **Maps showing the relative movements required to change from Malocclusion to Occlusion.**
4. **Maps showing contour lines of the Palate.**

A consulting department will be maintained. Appliances designed and constructed.

To charitable and educational institutions all work will be done at cost, computed by certified accountants, without any remuneration for the undersigned.

To dentists a moderate fee will be charged.

Frederick Lester Stanton, D. D. S.
Gilbert Dudley Fish, C. E.
28 West Thirty-ninth Street **NEW YORK**

WANTS, FOR SALE, ETC.

Confined to dental notices, Thirty words, $1.00. All over, 5 cents per word, letter or initial, Money with order. NO COPY RECEIVED AFTER 10TH OF MONTH PRECEDING NEXT ISSUE.

QUICK COLLECTIONS—Send us your accounts to-day and get "Quick Results." Collections made everywhere. William H. Dodd, 87 Nassau Street, New York. Established 25 years one address.

DENTAL EXCHANGE—Positions and locations in all states and practices handled. F. V. Kniest, R. P., Omaha, Nebr. Gilt edge references. Special plans. Service also for doctors, veterinarians, druggists, nurses.

FOR SALE—An ethical dental practice in Seattle, Washington, consisting of two complete modern dental outfits—laboratory and reception room. Two operators busy all the time. Owner busy with other line. $5,000 takes it. Address "Complete," care DENTAL DIGEST, 220 W. 42d St., N. Y. City.

FOR SALE IN INDIA—A well established and strictly ethical practice in a popular hill station. Office fitted with up-to-date electrical paraphernalia. Sixteen rupee fees. Average monthly returns 1862 rupees. Stock worth about 5000 rupees. Owner retiring and leaving India. Personal introduction given. Suitable for a qualified gentleman. Only those with 15,000 rupees at disposal need apply. Address "India," care DENTAL DIGEST, 220 West 42d Street, N. Y. City.

FOR SALE—New Vulcan Coil Tube, Tube Stand and all accessories. Reason for selling—have moved to a town with direct electrical current, and as machine is for alternating current cannot use same here. Cost about $300. For quick sale will take $200. The first check to reach me takes the machine. Will guarantee machine to do any dental X-ray work satisfactorily. Address Dr. R. D. Temple, Burt, Iowa.

WILL PAY 50 cents per gross for used burs. No recuts accepted. No.07 hand-pieces wanted. Reference, City National Bank, W. Weatherhead, Goshen, Indiana.

You can get what you want, or dispose of what you don't want by advertising ∴ ∴ It works both ways.

FOR SALE—Account of death, Connecticut practice and outfit in modern building; electricity, running water and heat; low rent. Only dentist, large territory. Address George Couture, Box 504, Taftville, Conn.

FOR SALE—Wisconsin dental practice. Rather an interest in same, with view to taking over all later. $4,000. Cash practice and can be increased. Many advantages to city and location. Particulars on request. Population 38,000. Finest hunting, fishing and automobiling district in state. Address Dr. E. B. FULLER, 119 Main Street, Oshkosh, Wis.

WANTED TO BUY—Good used switchboard, air compressor, standard-make chair and X-ray apparatus. Must be in good condition. Name best cash price. Address P. S. C., Box 62, Wilburton, Okla.

FOR SALE OR TRADE—$5,000 cash unopposed dental practice, in large rich territory. Electric equipment, small overhead expense. Would trade for California practice. Address Dentist, Queen City, Mo.

WANTED—Dentist to take charge of a $6,000 a year practice in St. Paul, Minn., for six months or longer. Good opportunity to make some money. License not necessary. Address Dr. H. I. W., Kendrick Bldg., St. Paul, Minn.

FOR RENT—Eleven room house, with bath. Used for the past five years for residence and dental parlor by one tenant. Reasonable rent. Address Box 35, Sayville, L. I., N. Y.

WANT A POSITION as dentist's assistant in N. Y. City. Have had 5 years' experience in dental office handling clerical end and making castings. Address "Assistant," care DENTAL DIGEST, 220 West 42d Street, New York.

WANTED—Laboratory man for plate department. Must be capable of turning out first-class plates in every respect. Must not be subject to war work. State salary, experience and reference in first letter. Address "Plate," care DENTAL DIGEST, 220 West 42d St., N. Y. City.

INDEX TO ADVERTISERS

The Esthetic Use of Gold

THE justification of dentistry is not its esthetic quality, but its endurance. It is found in service rather than in art. We find that art never precedes utility, but humbly follows.

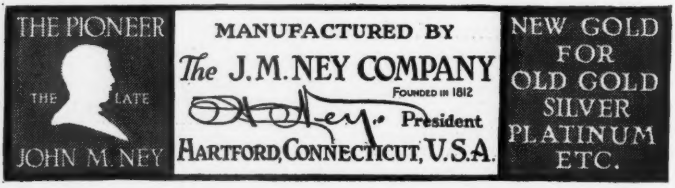
The prominent place dentistry occupies in human affairs is based on the relief of pain, the stopping of the ravages of disease, and the making of permanent restorations.

This, in most operations, means the use of gold. It has always meant that. An "esthetic" restoration that hasn't a considerable degree of permanency is like a beautiful temple that will not stand.

The esthetic use of gold means its employment to the extent needed for service and endurance, not crudely or immodestly.

You will be able to meet these requirements best in the use of *Ney's Golds,* "Best Since 1812."

If our products are not promptly and cheerfully supplied by your dealer write to us.



THE COUNTRY LIFE PRESS, GARDEN CITY, NEW YORK

Many discriminating dentists consider the difference in price between

TRUBYTE TEETH

and other teeth an investment in satisfaction for themselves and their patients.

AWAY WITH THE EXPERTS!

Mayor Hylan ran true to form at a recent budget hearing. "What do I care about men of international fame?" said he. Of course. He had already expressed his objections to experts, those who have some knowledge of what they are talking about. "We're weeding the experts out gradually," said the Mayor. He "eats 'em alive."

The point at issue was the preservation of the dental clinic to look after the school children's teeth. The appropriation asked was only $30,000. The work is of recognized, proven value, and results in very great actual pecuniary gain to the people in preventing future dentists' bills, to say nothing of the improvement in the children's health. Cutting it out as an "economy" is very petty business.

Perhaps the Mayor would prefer to turn the work over to some deserving Democratic plumber!—New York *Sun*.

EXTRACTIONS

Games of love often result in a tie.

The greatest bet ever made was the alphabet.

Sometimes a man avoids a scrape by letting his whiskers grow.

There are times when the loveliest spot on earth looks suspiciously like an ace.

Fish are said to be excellent brain food. It's a shame to waste the fish in some cases.

To the suburbanite life seems to be made up of mowing the lawn and shovelling snow off the walks.

A young man can button his sister's gloves in less than half the time it takes him to button any other girl's.

It is said that Marshal Foch smokes 2-cent cigars, but this does not account entirely for the German retreat.

Whether President Wilson means there will be no peace without laws, or with outlaws, it means the same thing.

Dr. Davis, the Kaiser's dentist, doesn't say so, but it seems possible that he may have pulled Wilhelm's wisdom teeth one absent-minded day.

She made a grand tour with Cook's tourists,
And spent a whole week in Paree,
So, of course she speaks French like a native—of
Kankakee.

What gets us guessing is how the daylight saving plan works out in the land of Eskimos, but we suppose all they have to do is to get up six months earlier each morning.

"I had terrible luck in that poker game," exclaimed Piute Pete.

"I understand you won some money."

"What's money when your reputation's gone? I held four aces three times in half an hour, and there ain't nobody that kin ever explain nothin' like that to his feller-citizens in Crimson Gulch."

The identity of the man whose cat got her head fast in the cream pitcher is believed to have been established by recent European events. You remember he cut the cat's head off to save the pitcher, and then broke the pitcher to get the head out. Indications are that he was a German superman of the Junker type.

He looked a sorry sight as he limped into the insurance office. Bandages were numerous, and he walked with the aid of a crutch.

"I have called to make application for the amount due on my accident policy," he said. "I fell down a long flight of stairs the other evening, and sustained damages that will disable me for some time to come."

The manager gave him a firm look.

"Young man," he replied, "I have investigated your case, and find that you are not entitled to anything. It could not be called an accident, for you certainly knew that the young lady's father was at home."

When a plumber makes a mistake, he charges twice for it.

When a lawyer makes a mistake, it's just what he wanted, because he has a chance to try the case all over again.

When a carpenter makes a mistake, it's just what he expected, because chances are ten to one that he never learned his trade anyway.

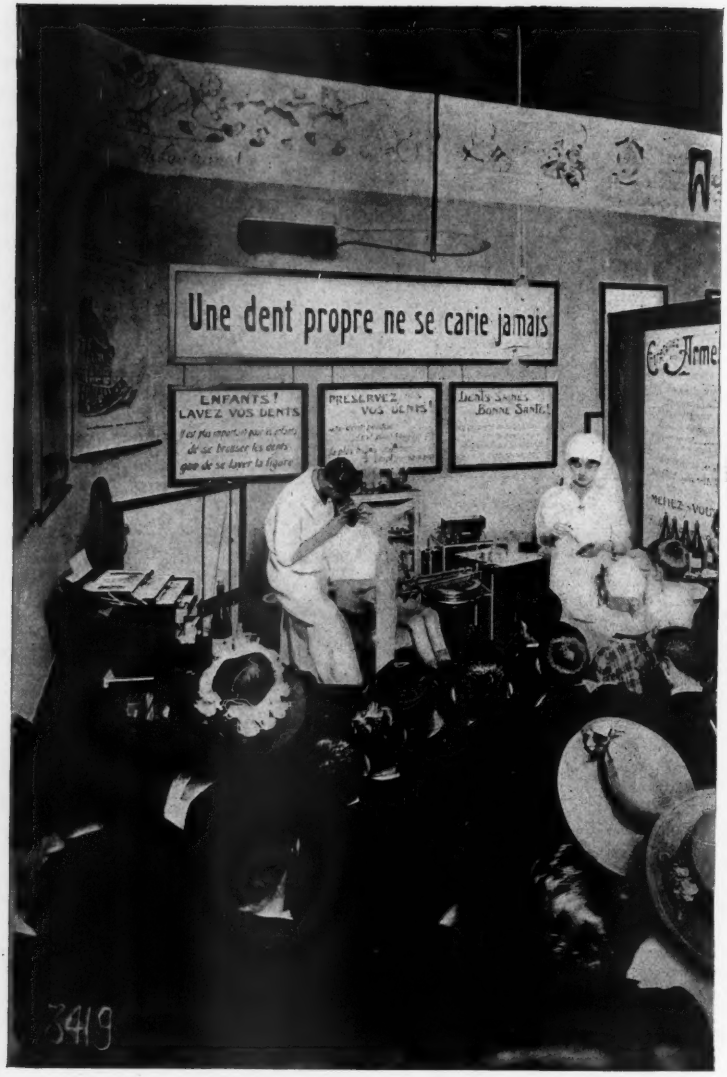
When a dentist makes a mistake, he can always repair the damage.

When a judge makes a mistake, it becomes the law of the land.

When a preacher makes a mistake, nobody knows the difference.

When an electrician makes a mistake, he blames it on induction—nobody knows what that is.

But when a newspaper man makes a mistake, GOOD NIGHT!



American dentist giving demonstration to a crowd in the dental clinic at the American Red Cross Child Welfare Exhibit in France

THE BEST OF CURRENT THOUGHT

[*Dental Cosmos*, November, 1918]

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VOL. XXIV DECEMBER, 1918 No. 12

THE DENTAL DIGEST

GEORGE WOOD CLAPP, D.D.S., EDITOR

Published monthly by THE DENTISTS' SUPPLY COMPANY, 220 West 42d Street, New York, U. S. A., to whom all communications relative to subscriptions, advertising, etc., should be addressed.

Subscription price, including postage, $1.00 per year to all parts of the United States, Philippines, Guam, Cuba, Porto Rico, Mexico and Hawaiian Islands. To Canada, $1.40. To all other Countries, $1.75.

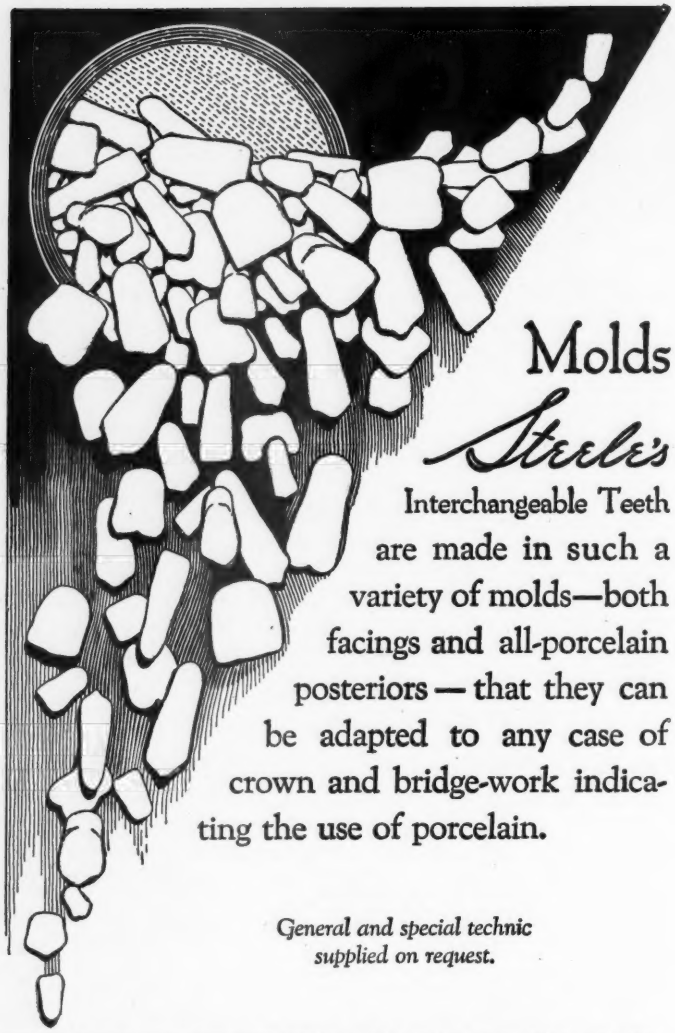
Articles intended for publication and correspondence regarding the same should be addressed EDITOR DENTAL DIGEST, Candler Bldg., Times Square, 220 West 42d Street, New York, N. Y.

The editor and publishers are not responsible for the views of authors expressed in these pages.

Entered as Second Class Matter, at the Post-Office at New York City, N. Y., January 29, 1909, under the Act of Congress, March 3, 1879.

TO OUR SUBSCRIBERS:

If your copy of Dental Digest does not reach you promptly, do not assume that it has gone astray. Railway traffic at the present time is so congested that even mail trains are subject to almost inevitable delays. If your copy is somewhat overdue, wait a little longer before writing. It will arrive safely.



Molds *Steele's*

Interchangeable Teeth are made in such a variety of molds—both facings and all-porcelain posteriors — that they can be adapted to any case of crown and bridge-work indicating the use of porcelain.

General and special technic supplied on request.

THE COLUMBUS DENTAL MANUFACTURING CO.

COLUMBUS, OHIO, U. S. A.

Editor's Corner

WHAT SHALL CHRISTMAS MEAN?

WHEN I was a boy Christmas meant to the average person in this country something different and I think something finer than it seems to mean in recent years. In those days it was marked by presents for the children and those we loved. People began months before to make little tokens, putting into them time, thought and affection. Those gifts expressed the kindly consideration which ennobles all gifts. There were few gifts of obligation.

Now-a-days the Christmas season is a shopping nightmare. In the cities many of us push through crowded stores and purchase from tired clerks something in which we take little interest to send to someone who doesn't want it. The fatigue, the payment of social obligations, the balancing of gift against gift and the commercializing of our gift-making have thrust from us the memory that the day celebrates the commencement of the greatest life of Service the world has known. What would the Christ, whose birth the day commemorates, say if he stood in one of our great stores, on December 21st?

This year we have opportunity to restore the true spirit of the day by addressing useful gifts to those in need. And of all gifts, food and clothing are the most elemental, the most necessary and the most appreciated.

Thousands among our allies are homeless, hungry and cold. Most of us have personal abundance. Some among us sorrow for vacant chairs that cannot be refilled. For them all sympathy and honor. But most of us have suffered only in purse and that not heavily.

Cannot we make this a real Christmas by limiting our gifts in number and value and donating the balance of our Christmas Fund to buy necessities for those from whom everything but life has been taken?

And when Christmas Day comes and we look upon or think about the family which has been spared, about even the home itself, which in other lands might be a mere rubbish heap or shell hole, may our happiness be increased by the knowledge that we have given something from our plenty to help those who lack, and that because of our gift someone is sheltered and fed who would otherwise shiver and famish while we rejoice.

GEORGE WOOD CLAPP.

COLGATE'S
RIBBON DENTAL CREAM

REG. U S. PAT. OFF.

Child Patients

CHILDREN need a dentifrice which leaves the mouth refreshed—one which "tastes good."

As they grow older they realize, more and more, the importance of the regular daily brushing, learned instinctively through the delicious flavor of Colgate's Ribbon Dental Cream.

Colgate's is safe for all your patients because it contains no injurious chemicals or harmful grit to injure delicate membranes of the mouth. It is a sane, thorough cleanser which does what a dentifrice should do—and avoids the absurd "curative" claims of some over-medicated preparations so disliked by children.

Dentists in active service appreciate the advantages of Colgate's Ribbon Dental Cream, as do their families at home.

The Pins of "Vulcanite" Teeth

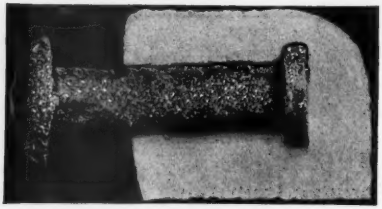


Fig. 1—Drawing of a baked-in-nickel-pin as seen under the microscope. Only the outside of the burnt pin metal is here shown.

The following information is rendered especially valuable at this time because a flood of "cheap" teeth has come upon the market. These teeth are sold at low prices, with plausible explanations, such as the necessity for conserving platinum, the saving in cost, etc. Many in the profession have had sorrowful experience with similar teeth in the past. This information is intended to protect readers against being misled.

The necessity of conserving platinum for war needs gave the finishing touch to a movement which had long been under way, viz., the elimination of platinum from "vulcanite" tooth pins. This movement was begun by "the Twentieth Century method" of soldering composition or nickel pins to anchorages previously baked in the teeth. This method provided large, strong pins which were not subjected to the heat of baking the porcelain. The porcelain was not cracked about the pins, as it generally was when platinum pins were baked in. The superior service rendered by Twentieth Century teeth won for them such professional favor that they were soon found to be superior to platinum pin "vulcanite" teeth.

This method was further improved by soldering pins of pure gold re-enforced with a nickel core as in Trubyte and Solila teeth. This pin was selected for Trubyte teeth because it was proved to be the most reliable pin known. So great was its success that long before the war, dental depots had discontinued or greatly reduced their stocks of platinum pin "vulcanite" teeth.

Fig. 2—When baked-in-nickel-pins are removed from the porcelain, a layer of burned pin metal frequently remains in the tooth as diagrammed here.

A Danger to be Guarded Against

Because the demand for Trubyte, Solila and Twentieth Century teeth exceeded the supply, there have been offered numerous brands of "vulcanite" teeth with pins of nickel or nickel alloy baked into the porcelain. Such teeth have only the one merit (?)—Cheapness.

We are familiar with every detail of baking nickel pins into high-fusing porcelain teeth. We know that it cannot be done without oxidizing the pin metal. Within the porcelain where the burnt metal cannot be removed, the outer layer generally remains as a powder when the pins are removed, as in Figure 2. The blackened outer scale can be removed from the projecting portion of the pin, leaving it fairly bright. But by no means all of the burnt metal is removed in that way, as is shown in Figure 3.

Nickel Pins in the Mouth

Composition or nickel pins, not oxidized by the heat

of the porcelain furnace, have stood well in the mouth. Millions of Twentieth Century teeth are giving excellent service. Some of them have been in the same mouth for 15 years.

Nickel pins and alloy pins which have been oxidized by the heat of the porcelain furnace do not long withstand the wear and tear of use in the mouth. Teeth of this kind have been often purchased as "Twentieth Century" teeth, but their failure soon taught dentists to distinguish them from the genuine "Twentieth Century" teeth and to reject the substitutes.

Fig. 3—Drawing of a baked-in-nickel-pin as it broke during experiment. A relatively thick rim of oxidized metal surrounds the unoxidized core.

Quality and Price

Because of the precious metals in Trubyte, Solila and "Twentieth Century" teeth, and of the much greater skill and labor required to make them, the cost is necessarily greater than that of teeth with nickel pins baked-in. Most dentists have considered the difference in price an investment in satisfaction, because fewer plates have to be made over by reason of pin failures than with any other form of pin teeth.

It was never necessary to use baked-in-nickel-pin teeth to conserve platinum. The method of manufacture of Trubyte, Solila and Twentieth Century teeth met all the government requirements and at the same time secured the advantages incident to the best form of pin construction. **All restrictions on the use of platinum are now removed.**

Be on Guard

When any teeth with baked-in-pins of nickel or nickel alloy are offered you, you may be sure that the pins have been oxidized by the heat of the porcelain furnace. When teeth are offered with the assertion that they are "the same as Twentieth Century," look at the lingual side for the little space left about each pin to accommodate a cushion of vulcanite. If you do not find the space do not buy the teeth. There are no "just-the-same-as." They are either Trubyte or Twentieth Century or they are no relation.

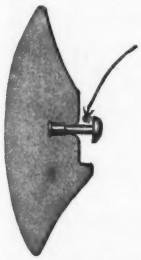


Fig. 4—The vulcanite forced into the recess about Trubyte and Twentieth Century pins forms a protective cushion.

Office Economy

You will save time and money by using the genuine Trubyte, Solila and Twentieth Century teeth, and you won't have to explain to patients why the pins broke, and then to replace the teeth or make a new plate.

Fig. 5—Each Trubyte tooth bears a Crescent on the lingual surface.

THE DENTISTS' SUPPLY COMPANY

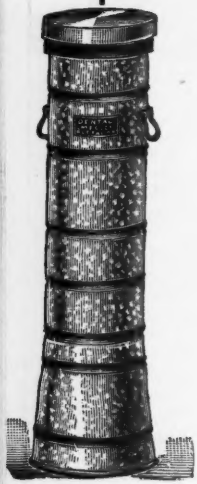
Sole Manufacturers of Trubyte Teeth

220 West 42nd Street New York

BANG!

THAT's what you hear when you attempt to swage on a corner of your bench, or on a wood block.

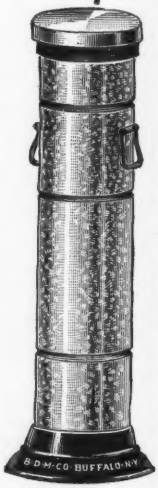
"Darn that boiler-maker upstairs" is what the man underneath says, and no doubt he is justified.



No. 113

Why wreck the building and make the neighbors sore, when the installation of one of our No. 113 type Swaging Anvils will prevent any such difficulty?

It consists of a galvanized iron stand filled to the top with sand on which rests a heavy cast-iron head. The sand takes the force of the blow and absorbs the jar and the recoil of the swaging hammer.



No. 113-B

It stands 28 inches from the floor, the block is 6¾ inches in diameter, and the outfit complete weighs 100 pounds.

No. 113, with galvanized iron stand - -	$ 9.50
No. 113-A, Japanned and striped - - -	11.50
No. 113-B, with cast iron base - - -	12.00
No. 113-C, Japanned and striped - - -	14.00

Shown in catalogue "D"

Buffalo Dental Manufacturing Co.

BUFFALO, N. Y., U. S. A.

The Daily Use of Pepsin

Pepsodent is based on pepsin, the digestant of albumin.

Its object is to combat mucin plaque, constantly and efficiently.

Its uniqueness lies in a patented method of activating pepsin without damage to enamel.

Its chief purpose as a dentifrice is to enable the daily application of pepsin.

The results have been proved by thousands of clinical and laboratory tests. And they are easily proved by any dentist who will put Pepsodent to test.

Part of its efficiency is due to a matchless abrasive. This is finely powdered calcium phosphate, the chief tooth constituent.

It is so efficient that some dentists, we learn, advise only occasional use. They are wrong. The most elaborate scientific tests prove that calcium phosphate does not scratch enamel.

The absence of soap adds to Pepsodent's efficiency. Soap is a lubricant which reduces tooth brush friction. It is also alkaline.

The non-alkaline character of Pepsodent also increases efficiency. Alkali tends to precipitate and to fix the mucin plaque.

We attempt in Pepsodent no germicidal action. It seems clear that no harmless dentifrice can be efficient as an oral germicide.

Pepsodent is suggested to the laity simply as a prophylactic. It has proved itself the best way known to constantly combat the plaque.

Dentists have found it of exceptional service in treating pyorrhea. And Pepsodent literature advises dental or medical attention for all diseased conditions.

You should know what Pepsodent means to you, and to those you treat. Send us the coupon and we will help you to full information.

Pepsodent PAT. OFF
REG U S

Dental Mucin Digestant

Based on activated pepsin
Contains no soap, no chalk

The Pepsodent Co.,
3901 Ludington Bldg.,
1104 So. Wabash Ave.,
Chicago.

Mail me information on Pepsodent.

.....

.....

ORGANIZATION AND CONSERVATION

MAKE **PRESERVATION** SURE

OUR UNCLE SAM ORDERS

US TO USE LESS **GOLD** A REQUEST SHOULD

HAVE BEEN SUFFICIENT. However, until further notice, we shall advocate, where **gold** is imperative, the use of our

LIGHT PERFECTION

This is made of 40 gauge 20k gold to which is soldered the gold mesh for retaining the rubber, thus producing the strongest light gold plate known. The right half of cut shows finished plate; left half gold and mesh.

PERFECTION GOLD PLATE
Patented April, 14, 1903

GOLD PLATE

We shall continue to furnish our regular gold plates of desirable weights either swaged or cast.

Cast swaged aluminum plates are in demand by many and will surely help conserve gold. RUBBER PLATES of the ELITE and RUGAE WAFER class are standard with us and will be made as usual.

REMOVABLE BRIDGES

OF THE

BONWILL, BENNETT BLADE AND SPLIT TUBE

types will **SAVE GOLD,** please the patient, help the cause, and put us

SHOULDER TO SHOULDER WITH UNCLE SAM

SAM'L G. SUPPLEE & CO.

1 UNION SQUARE, NEW YORK

KOLYNOS
AND
INFLUENZA

Protection from Infection is better than cure.

The Infection of Influenza is disseminated through the sputum, scattered by sneezing, or borne upon the exhalations of the breath. But no dentist need acquire this infection from, or transmit it to, his patient.

The intelligent use of Kolynos Dental Cream and Kolynos Liquid keeps the mouth, the throat and the air passages in a truly sanitary condition, in which infectious germs do not thrive.

During the hours of practice, frequently spray your own mouth, throat and nostrils with Kolynos Liquid, in such dilution as is agreeable, and do the same with your patient before and after treatment.

The germicidal power of undiluted Liquid Kolynos is equal to a solution of 30% of Carbolic Acid; even in full strength, however, it will not injure the most delicate tissue.

Neither in the epidemic of 1916, nor in the present epidemic, has there been a single case of Influenza among the large number of operatives employed in our laboratories. This immunity we attribute to the antiseptic properties of the volatile ingredients entering into the composition of Kolynos Dental Cream and Kolynos Liquid, with which the air of our factory is permeated.

THE KOLYNOS COMPANY
New Haven **Connecticut**

WANTED—1,000 Live Wires for Important Work

Now that the war is over, money is still necessary for reconstruction work.

The Pioneer Division of the War Savings Committee wants to hear from 1,000 men or women who have initiative and who will organize WAR SAVINGS SOCIETIES among their friends or employees.

Group saving through War Savings Societies is one of the most important features of the Government's plan to raise money.

It means launching our CASH ATTACK against foes by companies and regiments instead of individually.

It means the release of men, money and materials for essential work through saving on non-essentials.

It means organized economy and thrift and investment in Government securities.

It backs up our boys "over there" in a practical way, for example, a society of 20 members each buying a War Savings Stamp a month for a year will work wonders in the interest of peace.

You can become a recruiting officer for war savers.

It will take but little of your time.

Will You Volunteer?

Pioneer Division
NATIONAL WAR SAVINGS COMMITTEE
51 Chambers Street New York, N. Y.

Space Donated by
DENTISTS' SUPPLY COMPANY

$2.00 Two Dollars and Ten $10.00

These are the prices of the new packages of

Caulk Zinc Cement—plus Copr-Zinc—

The *two dollar box* contains a single shade—powder and liquid—and the *ten dollar box*, six times the quantity—six shades powder and six liquids—both carrying *extra vials Copr-Zinc* to make of your Zinc Cement a germicidal Copper Cement whenever the clinical indications demand and your judgment deems this necessary.*

CAULK ZINC CEMENT is made in laboratories devoting their whole energies to the perfection of dental filling materials.

These two new packages

Two Dollars and Ten

will simplify your buying.

"It is a satisfying cement" that every dealer will gladly sell you.

*Copper Iodide in *Caulk Copr-Zinc* and *Caulk White Copper Cement* is more potent as a germicide than any other form of either copper or silver.—*Caulk Scientific Bulletin No. 1.*

THE L.D.CAULK COMPANY
THE WORLDS GREATEST LABORATORIES for the manufacture of DENTAL FILLING MATERIALS
DEPOTS PITTSBURGH HUNTINGTON, W.VA. PHILADELPHIA, PENNA. TORONTO CANADA MILFORD DELAWARE